State of Hawaii DEPARTMENT OF LAND AND NATURAL RESOURCES

Division of Aquatic Resources Honolulu, Hawaii 96813

May 28, 2021

Board of Land and Natural Resources Honolulu, Hawaii

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National

Monument Special Ocean Use Permit to Tobias Nowlan, Silverback Films, Netflix

Production, for Access to State Waters to Film a Natural History Series on Wildlife

Movements, Migration, and Lifecycle Activities

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahanaumokuakea Marine National Monument Special Ocean Use Permit to Tobias Nowlan, Silverback Films, Netflix Production, pursuant to §187 A-6, Hawai 'i Revised Statutes (HRS), Chapter 13-60.5, Hawai 'i Administrative Rules (HAR), and all other applicable laws and regulations.

The Special Ocean Use permit, as described below, would allow entry and activities to occur in Papahanaumokuakea Marine National Monument, including the NWHI State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Kamole (Laysan Island)
- Kapou (Lisianski Island)
- French Frigate Shoals

The activities covered under this permit would be authorized to occur between June 2021 and April 2022.

INTENDED ACTIVITIES

The applicant proposes to connect the public to the Monument through the creation the Netflix production "Our Planet on the Move", a natural history series focusing in large part on the movements, migration, and lifecycle of the molī (Laysan albatross, *Phoebastria immutabilis*), ka'upu (black-footed albatross, *Phoebastria nigripes*), and niuhi (tiger shark, *Galeocerdo cuvier*). The obstacles and interactions they face along the way, including albatross depredation, would also be highlighted as part of this series.

To accomplish this, the applicant and a film crew of up to three additional individuals would access shallow-water and terrestrial areas at Kamole (Laysan Island) and/or Kapou (Lisianski Island) and/or Lalo (French Frigate Shoals) to document albatross colonies, particularly parent – chick albatross interactions, fledging, and niuhi-albatross interactions. Dropoff would be facilitated via the M/V Imua (separately permitted under PMNM-2021-001) and pickup, interisland transport, and other operations would be facilitated by an additional support vessel (TBD). Camping would take place on Kamole, Kapou, and potentially Tern Island, Lalo. Currently, access to Lalo as well as SCUBA activities are not planned, though they are requested in order to maintain flexibility. SCUBA activities would only be conducted if a non-sailing vessel with similar support capabilities to the M/V Searcher (the previously reviewed support vessel) is found. Filming would take place for up to 50 days total in the mid June – late July 2021 timeframe.

Though subject to change within the constraints of the parameters described above, the applicants planned itinerary would be as follows:

June 16: Imua departs with crew

June 20: Imua arrives Kapou

June 21 – July 13: Crew film topside at Kapou

July 12: Vessel (TBD) arrives at Kapou, collects crew and travels to Kamole

July 13 - 15: Crew films on Kamole (staying on the vessel OR camping – dependent on conditions and vessel)

July 16: Depart for HNL

July 19: Arrive HNL

As stated above, the proposed activity would document the development and fledging of Laysan and/ or black-footed albatross on film, as well as any possible interactions with tiger sharks, as part of a film showcasing the extraordinary journeys undertaken by these North Pacific migratory species. To accomplish this activity, the film crew will film the pre-fledging development and final interactions between parent and chick (before fledging) from shore using long lens and stabilized hand-held cameras. The film team will film the fledging behavior from shore with powerful long lenses and capture an element of both fledging and shark-albatross interaction from the water surface level (from the boat) and underwater. The shoot will predominantly focus on documenting the important moment where black-footed and Laysan albatrosses leave the beach on their maiden voyage (their first flight), and as such the majority of filming will be conducted from a respectful distance away from the chicks on land using the longest lenses in the industry (the use of these lenses will enable the film crew to maximize their distance from the subjects while minimizing disturbance). One lesser element of the sequence may require filming of albatross fledging behavior from within the water. This will be conducted using closed circuit rebreather systems.

<u>Chick development filming</u>: The filmmakers will also try to film the earlier chapter of the Laysan albatross chick's story. This will include filming of the albatross chick on or near the nest for several weeks once or at several points between March and July (depending on the advice of lead albatross researchers). Currently the most likely location to film this part of the story is Laysan Island, as part of

the same shoot to film fledging and predation. The focus would be to film the chick on its own while its parents are out at sea foraging, the chick as part of the entire colony of many chicks, and final parental interactions with the chick (when the parents return with food). Filming of this part of the story will be achieved using a principle topside long lens camera work (to cover most of the behavior and interaction with parents from a distance) and stabilized tracking techniques using compact handheld systems for details on shore. Filming near the chicks would at all times be under the advisement of the official Park Monitors who will supervise throughout the shoot. This section of the film will be very likely filmed at Laysan Island, and possibly again at a later date (perhaps in 2022) at other Laysan colonies in the monument (such as Midway Atoll or Kae'na Point under separate permits).

This activity will help the Monument by demonstrating to a huge global audience the importance of these islands as the principal outpost for the most extraordinary of all of Earth's migratory species. This series will highlight the most important locations on the planet for the world's most notable and threatened migratory animals. These two albatross species (Laysan and black-footed) and the tiger shark are three such species, and among the world's most accomplished travelers. Atolls in the Hawaiian National Monument, including Laysan, Lisianski and French Frigate Shoals are unique in that they host each of these species as important breeding and/ or staging grounds, providing a rare and exceptional platform for interactions that occur nowhere else on the planet. The film crew is eager to reveal the regional and global rarity and enormous significance of this remote and vulnerable location, as well as to feature the challenges that the colony faces in the 21st Century (including the effects of global climate change), demonstrating just what is at stake, and how important it is that outposts such as these are supported and protected. The film crew aims demonstrate the ecological significance of the Monument and to document the remarkable lives and journeys of these protected species.

The crew are experienced videographers in the industry, having made the highest-end wildlife films for the BBC, National Geographic and Netflix over the last 20 years (including *Planet Earth, Planet Earth II, Blue Planet* and *Our Planet*). "Our Planet on the Move" is a new series from Netflix, and is the sequel to the series Our Planet, narrated by Sir David Attenborough, released in 2019. Our Planet on the Move is the next installment in this franchise, and in 2023 will be released in over 190 countries worldwide, with a global reach of hundreds of millions of people. The series specifically looks at animal movements and migrations – for at any given moment on the planet, billions of animals are on the move. For many it's a migration, an annual trek that will take them thousands of miles across land, sea and air; for others, survival simply depends on never staying in one place, or setting out to find a new territory. Every journey has its own challenges, not least in this modern world where the animal travelers' routes are blocked, impeded and boxed in, and as habitats are destroyed across ancestral migration paths.

"Our North Pacific albatrosses" (film will feature black-footed and Laysan albatrosses) are perhaps the most important characters in the entire series, returning multiple times throughout the series as the world's most accomplished travelers. The Laysan albatross, as the oldest living bird on Earth, may cumulatively travel more miles in its lifetime than any other bird (and almost any other animal), earning this title as the most impressive of all ocean travelers. The film crew will follow albatross characters from the reunion of their parents after a year at sea, their lonely, challenging life on the nest as young chicks, and the all-important first flights as they fledge.

The migratory species that embark on the most significant journeys across the series are the tiger shark and the Laysan albatross. At French Frigate Shoals the film crew hopes to capture on film the most important chapter of these species journeys; the moment of fledging for the Laysan and black-footed

albatross chicks (and the moment they embark on a lifetime of being on the move), and tiger sharks which have traveled across an ocean to arrive at French Frigate Shoals specifically for this moment.

The crew will maintain a respectful distance from any filming subject. By using the industry's highest resolution cameras and the industry's most powerful long lenses (Canon CN20 50-1000mm), the filmmakers will be able to film intimate, natural behavior of the subjects whilst keeping distance and minimizing disturbance. It is imperative that the series captures only natural behavior that is uninfluenced by the filmmakers presence in any way. The crew are highly experienced in monitoring and observing animal behavior from afar whilst working in the field and will be able to quickly detect any signs of stress (in instances where subject species are particularly sensitive and prone to disturbance even when observed from afar). The crew have worked with multiple threatened seabird and shark species on many occasions and are experienced at filming these subjects effectively while maintaining minimal disturbance.

The crew will not touch an animal on shore or in the water and will not remove anything from the island or the Monument. The crew will only approach animals on land under the supervision/guidance of the Monument monitors, and will not approach any marine mammals at any time — either on land or in the water. The crew will follow Monument Biosecurity protocols both on land and in water.

The crew may additionally wish to film a few shots of green turtles hauling up on shore to rest/ on the beach in preparation to nest. Filming of this species will be under the advisement of attending Monument resource monitors and will closely follow Monument protocols.

<u>In-water filming</u>. Using scuba diving to film the underwater segment of the sequence will be done with extensive planning, use of a safety diver and dive supervisor, with several sets of eyes above water and below on the crew and the subject at all times. <u>See attached detailed dive plan summary</u> for inwater filming activities; note - due to the presence of an invasive algae (*Chondria tumulosa*), the applicant will no longer access Manawai (Pearl and Hermes Atoll) – all protocols outlined in dive plan will be implemented at French Frigate Shoals, Laysan Island or Lisianski Island. Also, a different vessel/captain may be utilized as a support vessel if in-water filming occurs.

Potential additional animals to be filmed include Hawaiian monk seals, green sea turtles, various species of sharks. Protected species (monk seals and turtles) would not be approached and only filmed within the recommended distances for viewing these species in PMNM Best Management Practice # 010 (Marine Wildlife Viewing Guidelines). The proposed activities would include in water filming of sharks (including swimming/snorkeling and only in presence of a qualified support vessel), and filming/photographing general wildlife and scenic features. All activities would be conducted under the accompaniment and direct supervision of a designated PMNM Resource Monitor.

All proposed activities will follow strict safeguards for the natural, cultural and historic resources of the Monument as required by Presidential Proclamation 8031, and other applicable law and agency policies and standard operating procedures. These practices and procedures will minimize or eliminate disturbance to wildlife, flora, habitats, and cultural and historic re-sources. Additionally, pre-access permit and cultural briefings will occur for all personnel entering the Monument.

Activities associated with this permit would not occur in the vicinity of any known maritime heritage or Native Hawaiian archaeological sites within the Monument. If any such archaeological sites are observed, locations of these resources would be immediately provided to the Monument Management Board and appropriate authorities.

In addition, to safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM:

- Human Hazards to Seabirds Briefing (BMP #003)
- Protocols to Reduce Impact to the Laysan Finch (BMP #005)
- Special Conditions and Rules for Moving Between Islands / Atolls and Packing for Field Camps (BMP #007)
- Reducing Light Impact to Sea Turtles (BMP #009)
- Marine Wildlife Viewing Guidelines (BMP #010)
- Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011)
- Precautions for Minimizing Human Impacts on Land Birds (BMP #012)
- Best Practices for Maritime Heritage Sites (BMP #017)

The activities will benefit the conservation and management of the Monument by supporting the Monument Management Plan (MMP) as described in:

Strategy MCS-3: Communicate results of research and monitoring over the life of the plan: Research is an exciting way to promote ecosystem literacy and caring for the NWHI. Ecosystem research-related education and outreach present an ideal opportunity to "bring the place to the people and not the people to the place." This strategy serves a dual purpose of presenting the science to a general audience and promoting the research necessary to manage the Monument. In addition, research and modeling discoveries can be shared with the public and incorporated into classroom curricula. Activities contained within this strategy apply to terrestrial and marine research and monitoring activities in the Monument. (PMNM MMP Vol. 1, p. 127, 2008).

Activity CBO-2.3: Support other entities' efforts to broaden knowledge of and appreciation for Monument resources and management priorities. Establishment of the Monument has created interest from documentary filmmakers, writers, photographers, and other entities to help us "bring the place to the people." The MMB will support those endeavors that provide benefit to Monument resources and management and our constituents without impacting Monument resources. (PMNM MMP Vol. 1, p. 271, 2008).

MMB Agency Reviewer Questions and Applicant Responses:

QUESTIONS:

1. Please describe your plan for camping ashore on Laysan and/or Pearl and Hermes Atoll.

Applicant Response: If we camp at either location at any point, it would be a 'bare bones' crew and kit. Only solar power would be used to recharge batteries or download footage. We would take small one-man tents and sleeping bags for each of the crew required to camp, and keep the camp as small as possible. We would bring any food with us (likely in the form of self-contained freeze-dried packaged meals which would just require the addition of hot water for consumption), and we would remove any trace of our presence after our stay. With the current plan it is unlikely there will be any camping during the shoot; we anticipate that we will stay onboard The Searcher each night, but it would be helpful to retain the option on location of camping should it clearly make logistical sense for a reason currently unseen in planning. Any item brought ashore would strictly adhere to required biosecurity measures.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

2. Where and how exactly do you propose to anchor your vessel, the Searcher, at Pearl and Hermes Atoll? Please be as detailed as possible, outlining potential if/then scenario and reasoning for each. If establishing a temporary mooring, we suggest you utilize a soft outer sleeve of some sort around the cable to minimize chaffing/intrusion on the rock.

Applicant Response: We will use the skiff/RIB and snorkelling to determine for certain that the boat channel is sufficiently deep and clear of obstructions before entry, then use handheld GPS to determine a safe course through the boat channel and into the lagoon to the anchor area. We will survey the interior of the lagoon at approximately 27.497.928n 175.51.350w (approx 500m NE of channel entrance) for an area free of coral and rock; sand bottom. We will then relay GPS info to the Searcher to plot our course, and have the skiff lead the way on the established course. We will have a snorkeler in the water to mark the anchor point, then drop anchor.

Alternatively, we will drop anchor outside of the channel at approx 27.497.306n 175.51.766w, on an area of hard pan bottom, free of rock or coral.

Mooring would be the last resort and Captain Littenberg has been told that the bottom is likely not conducive to this system. However, in this instance, the plan would be to use snorkelers to find a suitable protrusion on the bottom, "lasso" with steel cable (we can provide soft sheathing as requested above) with attached float buoy and mooring line. All done via skiff. We would then transfer the free end of the mooring line to the Searcher

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

3. What emergency communication devices are you taking on your visit to the Monument, and how will the Searcher communicate with people ashore?

Applicant Response: The Searcher will have VHF Radio and an on-board satellite phone available for use throughout the shoot. The film crew will be bringing a separate satellite phone for use during the shoot which will be available at all times. In addition, Toby will bring an InReach satellite messaging device which he will use for very regular, almost daily, contact with the office in the UK, and available contact with the coastguard/emergency contacts at all times. The crew will also be bringing radios to allow communication between the RHIB and those on the beach whilst filming, and between the RHIB and the Searcher. The RHIB crew will maintain radio contact with the Searcher, and the film crew can establish regular check ins with the Searcher Crew whilst filming (via radio and/or satellite phone).

The Searcher satellite phone number: 88167715830

The Searcher VHF call sign: WDA6100

*NOTE: Applicant may be using alternative vessel to the Searcher.

4. What medical provisions will the vessel be supplied with in the event of an emergency?

Applicant Response: The Searcher will bring an emergency O2 provision kit as well as an on-board first aid kit. In addition, Toby will be bringing a full first aid kit from the production to be available for use at any time. This kit will contain a full trauma kit (including wide range of bandages, dressings, tourniquets, burn gels, chest seals and other emergency supplies), a 'drugs' kit (including broad spectrum antibiotics for skin and digestive infections, painkillers, anti-nausea prescriptions) and general first aid supplies for remote locations (including antibiotic creams, antibiotic solutions, antifungal powders, rehydration salts, treatments for commonplace infections, bruises, nausea, aches and pains).

5. What scenes do you plan to film at Laysan Island?

Applicant Response: During this section of the shoot, we plan to film the pre-fledging chapter of the Laysan albatross chicks' early life. We hope this will include final parental visits and feeds, the chicks waiting on their own in the nest cup, wide shots of the colony to establish the large number of birds present, parental 'chases' (when chicks of many parents give chase to a single parent who arrives in the colony with food), and any other interactions during this challenging period for the chicks before they reach full independence. Guidance for what we will be able to film during this period at Laysan has been generously provided to us by biologists Jon Plissner and Beth Flint.

6. You mentioned filming Green Sea Turtles in your permit application, where do they fit into your story about albatross?

Applicant Response: The green turtle, like the Laysan albatross, is one of the world's greatest migrants, traveling tens of thousands of miles each year to reach the same sand bar they and their ancestors have nested for millennia. As such, we would like the opportunity to include some coverage of green turtles for our series, which showcases the world's greatest animal journeys. The green turtle's story doesn't fit specifically into our Laysan albatross segment, but would feature in our opener or closer for the series, when we reveal the world's greatest animal travelers.

7. Please provide more detail on all products/or episodes that will be produced. Is there a proposed timeline for the series to air on Netflix?

Applicant Response: Yes, the current schedule will deliver the series to Netflix in the first half of 2023. We do not have a transmission date from Netflix yet, but expect it will be shortly after delivery in 2023. The series consists of four episodes. Each of the episodes features a chapter of Earth's journey around the sun, and the animal journeys that occur during that time period. Our Laysan albatross story features heavily in two of the four episodes, with three full sequences spanning across both films.

COMMENTS / RECOMMENDATIONS:

1. Please thoroughly review and abide by BMP#10 "Marine & Wildlife Viewing Guidelines" as they pertain to your activity.

Applicant Response: We certainly will do, thank you.

2. Each island you are visiting has unique biosecurity restrictions that are crucial to take into account when forming your work plan. Please review BMP#7 "Special Conditions and Rules for Moving between Islands/Atolls and Packing for Field Camps" in detail, though a short summary is provided here:

Papahānaumokuākea Marine National Monument is home to unique marine and terrestrial environments brimming with endemic and endangered species. One of the greatest threats to the Monument is the introduction of invasive species. Preventive biosecurity protocols are enacted to

protect against the establishment of invasive species and are required for anyone entering the Monument. One of the strict biosecurity measures includes the quarantine process. Only new soft items are allowed on Laysan, FFS and Pearl and Hermes Atoll (new clothes, hats, camera straps, backpacks, bedding). All hard surface items must be thoroughly inspected and wiped down to prevent the introduction of insects or seeds. All items with the exception of electrical items and canned foods or delicate items must be frozen for 48 to 72 hours before the ship departs for the Monument. No cardboard or paperboard is allowed. No fresh produce is allowed on either of the islands.

Applicant Response: Thank you, we will review these requirements in full and I will feed them through to the boat and film crew, so that all personnel are aware of the restrictions. We will ensure that the biosecurity measures laid out are followed and prepared for ahead of our travel.

3. An experienced/knowledgeable Monument representative (Resource Monitor) will be assigned to accompany you while in the Monument, who can provide accurate information about all areas (marine and terrestrial) you are visiting.

Applicant Response: Acknowledged, thank you, we look forward to working with them on location.

4. After visiting/working at Pearl and Hermes Atoll, the Searcher won't be permitted to visit any other atolls or islands within Papahānaumokuākea Marine National Monument due to biosecurity concerns involving the recent outbreak of a destructive alga, *Chondria tumulosa*. Please review and abide by BMP #11 "Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment".

Applicant Response: *Understood, thank you.*

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

5. A review of your activities in review in relation to Chondria tumulosa. You will likely be required to adhere to additional decontamination/biosecurity protocols while operating at Pearl and Hermes.

Applicant Response: Acknowledged; please let us know if extra biosecurity measures are required and we will of course adhere to them.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

6. In preparation for your visit to Laysan Island and Southeast Island on Pearl and Hermes (both are home to the Laysan Finch), review and abide by BMP #5 "Protocols to Reduce Impact to the Laysan Finch".

Applicant Response: We certainly will, thank you.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

7. In preparation for diving, review and abide by BMP #4 "Best Management Practices (BMPs) for Boat Operations and Diving Activities".

Applicant Response: We will do, thank you.

8. While conducting in-water activities there shall be no direct interaction with, disturbance of, impact to or placement of gear or equipment on coral or live rock (defined as any natural hard substrate to which marine life is visibly attached or affixed).

Applicant Response: *Understood, thank you.*

9. Once logistics and dates are finalized, the applicant and Resource Monitor must contact the Hawaiian Monk Seal Research Program (Michelle Barbieri at Michelle.Barbieri@noaa.gov) and Marine Turtle Biology and Assessment Program (Yonat Swimmer at Yonat.Swimmer@noaa.gov, and Summer Martin at Summer.Martin@noaa.gov) to discuss potential protected species interactions as well as Covid-19 related concerns.

Applicant Response: Understood; we will happily discuss how to mitigate any concerns in both regards. We will coordinate with Michelle Barbieri, Yonat Swimmer, and Summer Martin regarding

COVID protocols and protected species concerns on any location (Laysan, Lisianski, or Tern Island) where we plan to access and/or camp.

10. The proposed dates at Pearl and Hermes Atoll have the potential to overlap with a Hawaiian Monk Seal Research Program camp arriving at that time. Considering the need for appropriate distancing for COVID safety and protected species interactions, we recommend the applicant and Resource Monitor closely coordinate with the Hawaiian Monk Seal Research Program (via Michelle Barbieri at Michelle.Barbieri@noaa.gov) regarding camping locations on Southeast Island.

Applicant Response: We'd be very happy to; Amanda and I can liaise with Michelle in advance of the trip. Many thanks. We will coordinate with Michelle Barbieri, Yonat Swimmer, and Summer Martin regarding COVID protocols and protected species concerns on any location (Laysan, Lisianski, or Tern Island) where we plan to access and/or camp.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

11. We kindly suggest using Hawaiian names for place, plants, and animals when feasible in your production. This normalizes the use of 'ōlelo Hawai'i (Hawaiian language) and perpetuates Hawaiian culture. For questions or more information on specific names please contact Kalani Quiocho, Native Hawaiian Program Specialist at kalani.quiocho@noaa.gov.

Applicant Response: Acknowledged, thank you.

Agency Response: OHA appreciates the applicants willingness to use Hawaiian names within their publications for the birds that they will be studying. It is a great step in normalizing Native Hawaiian perspectives and traditions within our activities in Papahānaumokuākea and all of Hawai'i.

12. Would the applicant be open to discussing potentially filming specific areas for management agencies to use for education and outreach purposes, as time allows? This often involves capturing footage in off times when primary subjects are not available.

Applicant Response: We would certainly be open to discussing filming these areas if beneficial and helpful to the Monument. Of course with such a big investment from the series in filming this story, and very limited time in the field that the Searcher can commit to us being 'at station' for filming (due to fuel restrictions), time in the field will be very limited, but if we are able to assist in these efforts we would of course be happy to and will do what we can to achieve this.

13. As a requirement, Papahānaumokuākea Marine National Monument must be mentioned by name in the video and/or credits.

Applicant Response: We would be very happy to include Papahānaumokuākea Marine National Monument in our credits in recognition of the huge amount of help that the Monument have generously given to us. The final approval lies with Netflix at the end of the production, but we do not foresee this being a problem at all.

The activities described above may require the following regulated activities to occur in State waters:

Anchoring a vessel (TBD with Searcher or other vessel used for support platform; see details later)

Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since March, 2021, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Environmental Compliance:

NEPA / HEPA: (check-one)

Categorical Exclusion / Exempt Class: 5

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	□ EA			
	EIS			
Other Consultations/P	Permits: (ESA/MMPA Section 7; NHPA	Section 106, etc.)		
Stevens Fishe underway by	n of all aforementioned activities follory Conservation and Management Act NOAA National Marine Fisheries Section 2. Specific conditions that may result from the permit.	(MSA; 16 U.S.C. 18 rvice (NMFS) Pacifi	355(b)) is currentled to Islands Regiona	ly al
consultation p of proposed a consultation n	the National Marine Fisheries Servi ursuant to the Endangered Species Act of activities within the Monument on pr nay require the applicant to adhere to of uld be reflected in the PMNM permit, p	of 1973 is underway to totected species. The other NMFS-prescribe	analyze the effect te outcome of the	ts is
HRS, and Chapter 12 THE PREPARATI AUTHORITY OF PAPAHĀNAUMOK PERMIT TO TOBLA ACCESS TO STAT	made an exemption determination for 1-200, HAR. See Attachment ("DECI ON OF AN ENVIRONMENTA CHAPTER 343, HRS AND UĀKEA MARINE NATIONAL MOAS NOWLAN, SILVERBACK FILME WATERS TO FILM A NATURAL GRATION, AND LIFECYCLE ACT	LARATION OF EXIL ASSESSMENT CHAPTER 11-2 ONUMENT SPECI MS, NETFLIX PRO L HISTORY SERIE	EMPTION FROM UNDER TH 00 HAR, FOR AL OCEAN US DDUCTION, FOR SON WILDLIF	M E R E R
Has Applicant been gra	anted a permit from the State in the past?	Yes □	No ⊠	
If so, please summarize	e past permits:			
Have there been any	a) violations:b) Late/incomplete post-activity reports	Yes □ :: Yes □	No ⊠ No ⊠	

Yes □

No ⊠

STAFF OPINION:

Are there any other relevant concerns from previous permits?

PMNM staff is of the opinion that Applicant has properly demonstrated valid justifications for their application and should be allowed to enter the NWHI State waters and to conduct the activities therein as specified in the application with certain special instructions and conditions, which are in addition to the Papahanaumokuakea Marine National Monument Special Ocean Use Permit General Conditions. All suggested special conditions have been vetted through the legal counsel of the Co-Trustee agencies (see Recommendation section).

MONUMENT MANAGEMENT BOARD OPINION:

The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by PMNM staff.

RECOMMENDATION:

Based on the attached proposed declaration of exemption prepared by the department after consultation with and advice of those having jurisdiction and expertise for the proposed permit actions:

- 1. That the Board declare that the actions which are anticipated to be undertaken under this permit will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.
- 2. Upon the finding and adoption of the department's analysis by the Board, that the Board delegate and authorize the Chairperson to sign the declaration of exemption for purposes of recordkeeping requirements of chapter 343, HRS, and chapter 11-200, HAR.
- 3. That the Board authorize and approve a Special Ocean Use Permit to Tobias Nowlan, Silverback Films, Netflix Production, with the following special conditions:
 - a. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.
 - b. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
 - c. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge.
 - d. No fishing is allowed in State Waters except as authorized under state law for subsistence, traditional, and customary practices by Native Hawaiians.
 - e. If there is any Hawaiian monk seal or any other protected species in the area when performing any permitted activity shall cease until the animal(s) depart the area,

except as permitted for specific management of that species.

- f. For all activities requiring landing on uninhabited islands an authorized staff escort trained for each particular inhabited island will be included on the landing team.
- g. No direct interaction with, disturbance of, impact to or placement of camera equipment, or other gear or equipment, will occur on coral or live rock (defined as any natural hard substrate to which marine life is visibly attached or affixed).
- h. The permittee is required to follow all applicable Federal, State, and County laws with respect to the COVID-19 emergency response that apply at the time of departure and return. In issuance of this permit, the State of Hawaii is not otherwise monitoring or regulating permittee's compliance with COVID-19 laws and is not responsible for the health and safety of crew members, researchers or other occupants of the vessel associated with this permit.

Respectfully submitted,

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Brian J. Neilson, Administrator

Division of Aquatic Resources

APPROVED FOR SUBMITTAL

Sgame Q. Cose

Suzanne D. Case, Chairperson Board of Land and Natural Resources

Attachments:

- 1) Declaration of Exemption ("DE") from the Preparation of an Environmental Assessment under the Authority of Chapter 343, HRS & Chapter 11-200 HAR
- 2) PMNM Application
- 3) Diving Risk Assessment Form

DAVID Y. IGE GOVERNOR OF HAWAII





STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621 HONOLULU, HAWAII 96809

May 28, 2021

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA

M. KALEO MANUEL

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

TO: Division of Aquatic Resources File

THROUGH: Suzanne D. Case, Chairperson

FROM: Brian J. Neilson, Administrator

Division of Aquatic Resources

SUBJECT:

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR A PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT SPECIAL OCEAN USE PERMIT TO TOBIAS NOWLAN, SILVERBACK FILMS, NETFLIX PRODUCTION, FOR ACCESS TO STATE WATERS TO FILM A NATURAL HISTORY SERIES ON WILDLIFE MOVEMENTS, MIGRATION, AND LIFECYCLE ACTIVITIES UNDER PERMIT PMNM-2021-002.

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR:

<u>Project Title</u>: Papahānaumokuākea Marine National Monument Special Ocean Use Permit to Tobias Nowlan, Silverback Films, Netflix Production, for Access to State Waters to Film a Natural History Series on Wildlife Movements, Migration, and Lifecycle Activities.

Permit Number: PMNM-2021-002

<u>Project Description</u>: The applicant proposes to connect the public to the Monument through the creation the Netflix production "Our Planet on the Move", a natural history series focusing in large part on the movements, migration, and lifecycle of the molī (Laysan albatross, *Phoebastria immutabilis*), ka'upu (black-footed albatross, *Phoebastria nigripes*), and niuhi (tiger shark, *Galeocerdo cuvier*). The obstacles and interactions they face along the way, including albatross depredation, would also be highlighted as part of this series.

To accomplish this, the applicant and a film crew of up to three additional individuals would access shallow-water and terrestrial areas at Kamole (Laysan Island) and/or Kapou (Lisianski Island) and/or Lalo (French Frigate Shoals) to document albatross colonies, particularly parent – chick albatross interactions,

fledging, and niuhi-albatross interactions. Dropoff would be facilitated via the M/V Imua (separately permitted under PMNM-2021-001) and pickup, interisland transport, and other operations would be facilitated by an additional support vessel (TBD). Camping would take place on Kamole, Kapou, and potentially Tern Island, Lalo. Currently, access to Lalo as well as SCUBA activities are not planned, though they are requested in order to maintain flexibility. SCUBA activities would only be conducted if a non-sailing vessel with similar support capabilities to the M/V Searcher (the previously reviewed support vessel) is found. Filming would take place for up to 50 days total in the mid June – late July 2021 timeframe.

Though subject to change within the constraints of the parameters described above, the applicants planned itinerary would be as follows:

June 16: Imua departs with crew

June 20: Imua arrives Kapou

June 21 – July 13: Crew film topside at Kapou

July 12: Vessel (TBD) arrives at Kapou, collects crew and travels to Kamole

July 13 – 15: Crew films on Kamole (staying on the vessel OR camping – dependent on conditions and vessel)

July 16: Depart for HNL

July 19: Arrive HNL

As stated above, the proposed activity would document the development and fledging of Laysan and/ or black-footed albatross on film, as well as any possible interactions with tiger sharks, as part of a film showcasing the extraordinary journeys undertaken by these North Pacific migratory species. To accomplish this activity, the film crew will film the pre-fledging development and final interactions between parent and chick (before fledging) from shore using long lens and stabilized hand-held cameras. The film team will film the fledging behavior from shore with powerful long lenses and capture an element of both fledging and shark-albatross interaction from the water surface level (from the boat) and underwater. The shoot will predominantly focus on documenting the important moment where black-footed and Laysan albatrosses leave the beach on their maiden voyage (their first flight), and as such the majority of filming will be conducted from a respectful distance away from the chicks on land using the longest lenses in the industry (the use of these lenses will enable the film crew to maximize their distance from the subjects while minimizing disturbance). One lesser element of the sequence may require filming of albatross fledging behavior from within the water. This will be conducted using closed circuit rebreather systems.

Chick development filming: The filmmakers will also try to film the earlier chapter of the Laysan albatross chick's story. This will include filming of the albatross chick on or near the nest for several weeks once or at several points between March and July (depending on the advice of lead albatross researchers). Currently the most likely location to film this part of the story is Laysan Island, as part of the same shoot to film fledging and predation. The focus would be to film the chick on its own while its parents are out at sea foraging, the chick as part of the entire colony of many chicks, and final parental interactions with the chick (when the parents return with food). Filming of this part of the story will be achieved using a principle topside long lens camera work (to cover most of the behavior and interaction with parents from a distance) and stabilized tracking techniques using compact handheld systems for details on shore. Filming near the chicks would at all times be under the advisement of the official Park

Monitors who will supervise throughout the shoot. This section of the film will be very likely filmed at Laysan Island, and possibly again at a later date (perhaps in 2022) at other Laysan colonies in the monument (such as Midway Atoll or Kae'na Point under separate permits).

This activity will help the Monument by demonstrating to a huge global audience the importance of these islands as the principal outpost for the most extraordinary of all of Earth's migratory species. This series will highlight the most important locations on the planet for the world's most notable and threatened migratory animals. These two albatross species (Laysan and black-footed) and the tiger shark are three such species, and among the world's most accomplished travelers. Atolls in the Hawaiian National Monument, including Laysan, Lisianski and French Frigate Shoals are unique in that they host each of these species as important breeding and/ or staging grounds, providing a rare and exceptional platform for interactions that occur nowhere else on the planet. The film crew is eager to reveal the regional and global rarity and enormous significance of this remote and vulnerable location, as well as to feature the challenges that the colony faces in the 21st Century (including the effects of global climate change), demonstrating just what is at stake, and how important it is that outposts such as these are supported and protected. The film crew aims demonstrate the ecological significance of the Monument and to document the remarkable lives and journeys of these protected species.

The crew are experienced videographers in the industry, having made the highest-end wildlife films for the BBC, National Geographic and Netflix over the last 20 years (including *Planet Earth, Planet Earth II, Blue Planet* and *Our Planet*). "Our Planet on the Move" is a new series from Netflix, and is the sequel to the series Our Planet, narrated by Sir David Attenborough, released in 2019. Our Planet on the Move is the next installment in this franchise, and in 2023 will be released in over 190 countries worldwide, with a global reach of hundreds of millions of people. The series specifically looks at animal movements and migrations – for at any given moment on the planet, billions of animals are on the move. For many it's a migration, an annual trek that will take them thousands of miles across land, sea and air; for others, survival simply depends on never staying in one place, or setting out to find a new territory. Every journey has its own challenges, not least in this modern world where the animal travelers' routes are blocked, impeded and boxed in, and as habitats are destroyed across ancestral migration paths.

"Our North Pacific albatrosses" (film will feature black-footed and Laysan albatrosses) are perhaps the most important characters in the entire series, returning multiple times throughout the series as the world's most accomplished travelers. The Laysan albatross, as the oldest living bird on Earth, may cumulatively travel more miles in its lifetime than any other bird (and almost any other animal), earning this title as the most impressive of all ocean travelers. The film crew will follow albatross characters from the reunion of their parents after a year at sea, their lonely, challenging life on the nest as young chicks, and the all-important first flights as they fledge.

The migratory species that embark on the most significant journeys across the series are the tiger shark and the Laysan albatross. At French Frigate Shoals the film crew hopes to capture on film the most important chapter of these species journeys; the moment of fledging for the Laysan and black-footed albatross chicks (and the moment they embark on a lifetime of being on the move), and tiger sharks which have traveled across an ocean to arrive at French Frigate Shoals specifically for this moment.

The crew will maintain a respectful distance from any filming subject. By using the industry's highest resolution cameras and the industry's most powerful long lenses (Canon CN20 50-1000mm), the filmmakers will be able to film intimate, natural behavior of the subjects whilst keeping distance and

minimizing disturbance. It is imperative that the series captures only natural behavior that is uninfluenced by the filmmakers presence in any way. The crew are highly experienced in monitoring and observing animal behavior from afar whilst working in the field and will be able to quickly detect any signs of stress (in instances where subject species are particularly sensitive and prone to disturbance even when observed from afar). The crew have worked with multiple threatened seabird and shark species on many occasions and are experienced at filming these subjects effectively while maintaining minimal disturbance.

The crew will not touch an animal on shore or in the water and will not remove anything from the island or the Monument. The crew will only approach animals on land under the supervision/ guidance of the Monument monitors, and will not approach any marine mammals at any time — either on land or in the water. The crew will follow Monument Biosecurity protocols both on land and in water.

The crew may additionally wish to film a few shots of green turtles hauling up on shore to rest/ on the beach in preparation to nest. Filming of this species will be under the advisement of attending Monument resource monitors and will closely follow Monument protocols.

<u>In-water filming</u>. Using scuba diving to film the underwater segment of the sequence will be done with extensive planning, use of a safety diver and dive supervisor, with several sets of eyes above water and below on the crew and the subject at all times. <u>See attached detailed dive plan summary</u> for in-water filming activities; note - due to the presence of an invasive algae (*Chondria tumulosa*), the applicant will no longer access Manawai (Pearl and Hermes Atoll) – all protocols outlined in dive plan will be implemented at French Frigate Shoals, Laysan Island or Lisianski Island. Also, a different vessel/captain may be utilized as a support vessel if in-water filming occurs.

Potential additional animals to be filmed include Hawaiian monk seals, green sea turtles, various species of sharks. Protected species (monk seals and turtles) would not be approached and only filmed within the recommended distances for viewing these species in PMNM Best Management Practice # 010 (Marine Wildlife Viewing Guidelines). The proposed activities would include in water filming of sharks (including swimming/snorkeling and only in presence of a qualified support vessel), and filming/photographing general wildlife and scenic features. All activities would be conducted under the accompaniment and direct supervision of a designated PMNM Resource Monitor.

All proposed activities will follow strict safeguards for the natural, cultural and historic resources of the Monument as required by Presidential Proclamation 8031, and other applicable law and agency policies and standard operating procedures. These practices and procedures will minimize or eliminate disturbance to wildlife, flora, habitats, and cultural and historic re-sources. Additionally, pre-access permit and cultural briefings will occur for all personnel entering the Monument.

Activities associated with this permit would not occur in the vicinity of any known maritime heritage or Native Hawaiian archaeological sites within the Monument. If any such archaeological sites are observed, locations of these resources would be immediately provided to the Monument Management Board and appropriate authorities.

In addition, to safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM:

- Human Hazards to Seabirds Briefing (BMP #003)
- Protocols to Reduce Impact to the Laysan Finch (BMP #005)
- Special Conditions and Rules for Moving Between Islands / Atolls and Packing for Field Camps (BMP #007)
- Reducing Light Impact to Sea Turtles (BMP #009)
- Marine Wildlife Viewing Guidelines (BMP #010)
- Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011)
- Precautions for Minimizing Human Impacts on Land Birds (BMP #012)
- Best Practices for Maritime Heritage Sites (BMP #017)

The activities will benefit the conservation and management of the Monument by supporting the Monument Management Plan (MMP) as described in:

Strategy MCS-3: Communicate results of research and monitoring over the life of the plan: Research is an exciting way to promote ecosystem literacy and caring for the NWHI. Ecosystem research-related education and outreach present an ideal opportunity to "bring the place to the people and not the people to the place." This strategy serves a dual purpose of presenting the science to a general audience and promoting the research necessary to manage the Monument. In addition, research and modeling discoveries can be shared with the public and incorporated into classroom curricula. Activities contained within this strategy apply to terrestrial and marine research and monitoring activities in the Monument. (PMNM MMP Vol. 1, p. 127, 2008).

Activity CBO-2.3: Support other entities' efforts to broaden knowledge of and appreciation for Monument resources and management priorities. Establishment of the Monument has created interest from documentary filmmakers, writers, photographers, and other entities to help us "bring the place to the people." The MMB will support those endeavors that provide benefit to Monument resources and management and our constituents without impacting Monument resources. (PMNM MMP Vol. 1, p. 271, 2008).

MMB Agency Reviewer Questions and Applicant Responses: QUESTIONS:

1. Please describe your plan for camping ashore on Laysan and/or Pearl and Hermes Atoll.

Applicant Response: If we camp at either location at any point, it would be a 'bare bones' crew and kit. Only solar power would be used to recharge batteries or download footage. We would take small one-man tents and sleeping bags for each of the crew required to camp, and keep the camp as small as possible. We would bring any food with us (likely in the form of self-contained freeze-dried packaged meals which would just require the addition of hot water for consumption), and we would remove any trace of our presence after our stay. With the current plan it is unlikely there will be any camping during the shoot; we anticipate that we will stay onboard The Searcher each night, but it would be helpful to retain the option on location of camping should it clearly make logistical sense for a reason currently unseen in planning. Any item brought ashore would strictly adhere to required biosecurity measures.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

2. Where and how exactly do you propose to anchor your vessel, the Searcher, at Pearl and Hermes Atoll? Please be as detailed as possible, outlining potential if/then scenario and reasoning for each. If establishing a temporary mooring, we suggest you utilize a soft outer sleeve of some sort around the cable to minimize chaffing/intrusion on the rock.

Applicant Response: We will use the skiff/RIB and snorkelling to determine for certain that the boat channel is sufficiently deep and clear of obstructions before entry, then use handheld GPS to determine a safe course through the boat channel and into the lagoon to the anchor area. We will survey the interior of the lagoon at approximately 27.497.928n 175.51.350w (approx 500m NE of channel entrance) for an area free of coral and rock; sand bottom. We will then relay GPS info to the Searcher to plot our course, and have the skiff lead the way on the established course. We will have a snorkeler in the water to mark the anchor point, then drop anchor.

Alternatively, we will drop anchor outside of the channel at approx 27.497.306n 175.51.766w, on an area of hard pan bottom, free of rock or coral.

Mooring would be the last resort and Captain Littenberg has been told that the bottom is likely not conducive to this system. However, in this instance, the plan would be to use snorkelers to find a suitable protrusion on the bottom, "lasso" with steel cable (we can provide soft sheathing as requested above) with attached float buoy and mooring line. All done via skiff. We would then transfer the free end of the mooring line to the Searcher

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

3. What emergency communication devices are you taking on your visit to the Monument, and how will the Searcher communicate with people ashore?

Applicant Response: The Searcher will have VHF Radio and an on-board satellite phone available for use throughout the shoot. The film crew will be bringing a separate satellite phone for use during the shoot which will be available at all times. In addition, Toby will bring an InReach satellite messaging device which he will use for very regular, almost daily, contact with the office in the UK, and available contact with the coastguard/emergency contacts at all times. The crew will also be bringing radios to allow communication between the RHIB and those on the beach whilst filming, and between the RHIB and the Searcher. The RHIB crew will maintain radio contact with the Searcher, and the film crew can establish regular check ins with the Searcher Crew whilst filming (via radio and/or satellite phone).

The Searcher satellite phone number: 88167715830

The Searcher VHF call sign: WDA6100

*NOTE: Applicant may be using alternative vessel to the Searcher.

4. What medical provisions will the vessel be supplied with in the event of an emergency?

Applicant Response: The Searcher will bring an emergency O2 provision kit as well as an on-board first aid kit. In addition, Toby will be bringing a full first aid kit from the production to be available for use at any time. This kit will contain a full trauma kit (including wide range of bandages, dressings, tourniquets, burn gels, chest seals and other emergency supplies), a 'drugs' kit (including broad spectrum antibiotics for skin and digestive infections, painkillers, anti-nausea prescriptions) and general first aid supplies for remote locations (including antibiotic creams, antibiotic solutions, anti-fungal powders, rehydration salts, treatments for commonplace infections, bruises, nausea, aches and pains).

5. What scenes do you plan to film at Laysan Island?

Applicant Response: During this section of the shoot, we plan to film the pre-fledging chapter of the Laysan albatross chicks' early life. We hope this will include final parental visits and feeds, the chicks waiting on their own in the nest cup, wide shots of the colony to establish the large number of birds present, parental 'chases' (when chicks of many parents give chase to a single parent who arrives in the colony with food), and any other interactions during this challenging period for the chicks before they reach full independence. Guidance for what we will be able to film during this period at Laysan has been generously provided to us by biologists Jon Plissner and Beth Flint.

6. You mentioned filming Green Sea Turtles in your permit application, where do they fit into your story about albatross?

Applicant Response: The green turtle, like the Laysan albatross, is one of the world's greatest migrants, traveling tens of thousands of miles each year to reach the same sand bar they and their ancestors have nested for millennia. As such, we would like the opportunity to include some coverage of green turtles for our series, which showcases the world's greatest animal journeys. The green turtle's story doesn't fit specifically into our Laysan albatross segment, but would feature in our opener or closer for the series, when we reveal the world's greatest animal travelers.

7. Please provide more detail on all products/or episodes that will be produced. Is there a proposed timeline for the series to air on Netflix?

Applicant Response: Yes, the current schedule will deliver the series to Netflix in the first half of 2023. We do not have a transmission date from Netflix yet, but expect it will be shortly after delivery in 2023. The series consists of four episodes. Each of the episodes features a chapter of Earth's journey around the sun, and the animal journeys that occur during that time period. Our Laysan albatross story features heavily in two of the four episodes, with three full sequences spanning across both films.

COMMENTS / RECOMMENDATIONS:

1. Please thoroughly review and abide by BMP#10 "Marine & Wildlife Viewing Guidelines" as they pertain to your activity.

Applicant Response: We certainly will do, thank you.

2. Each island you are visiting has unique biosecurity restrictions that are crucial to take into account when forming your work plan. Please review BMP#7 "Special Conditions and Rules for Moving

between Islands/Atolls and Packing for Field Camps" in detail, though a short summary is provided here:

Papahānaumokuākea Marine National Monument is home to unique marine and terrestrial environments brimming with endemic and endangered species. One of the greatest threats to the Monument is the introduction of invasive species. Preventive biosecurity protocols are enacted to protect against the establishment of invasive species and are required for anyone entering the Monument. One of the strict biosecurity measures includes the quarantine process. Only new soft items are allowed on Laysan, FFS and Pearl and Hermes Atoll (new clothes, hats, camera straps, backpacks, bedding). All hard surface items must be thoroughly inspected and wiped down to prevent the introduction of insects or seeds. All items with the exception of electrical items and canned foods or delicate items must be frozen for 48 to 72 hours before the ship departs for the Monument. No cardboard or paperboard is allowed. No fresh produce is allowed on either of the islands.

Applicant Response: Thank you, we will review these requirements in full and I will feed them through to the boat and film crew, so that all personnel are aware of the restrictions. We will ensure that the biosecurity measures laid out are followed and prepared for ahead of our travel.

3. An experienced/knowledgeable Monument representative (Resource Monitor) will be assigned to accompany you while in the Monument, who can provide accurate information about all areas (marine and terrestrial) you are visiting.

Applicant Response: Acknowledged, thank you, we look forward to working with them on location.

4. After visiting/working at Pearl and Hermes Atoll, the Searcher won't be permitted to visit any other atolls or islands within Papahānaumokuākea Marine National Monument due to biosecurity concerns involving the recent outbreak of a destructive alga, *Chondria tumulosa*. Please review and abide by BMP #11 "Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment".

Applicant Response: *Understood, thank you.*

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

5. A review of your activities in review in relation to Chondria tumulosa. You will likely be required to adhere to additional decontamination/biosecurity protocols while operating at Pearl and Hermes.

Applicant Response: Acknowledged; please let us know if extra biosecurity measures are required and we will of course adhere to them.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

6. In preparation for your visit to Laysan Island and Southeast Island on Pearl and Hermes (both are home to the Laysan Finch), review and abide by BMP #5 "Protocols to Reduce Impact to the Laysan Finch".

Applicant Response: We certainly will, thank you.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

7. In preparation for diving, review and abide by BMP #4 "Best Management Practices (BMPs) for Boat Operations and Diving Activities".

Applicant Response: We will do, thank you.

8. While conducting in-water activities there shall be no direct interaction with, disturbance of, impact to or placement of gear or equipment on coral or live rock (defined as any natural hard substrate to which marine life is visibly attached or affixed).

Applicant Response: *Understood, thank you.*

9. Once logistics and dates are finalized, the applicant and Resource Monitor must contact the Hawaiian Monk Seal Research Program (Michelle Barbieri at Michelle.Barbieri@noaa.gov) and Marine Turtle Biology and Assessment Program (Yonat Swimmer at Yonat.Swimmer@noaa.gov, and Summer Martin at Summer.Martin@noaa.gov) to discuss potential protected species interactions as well as Covid-19 related concerns.

Applicant Response: Understood; we will happily discuss how to mitigate any concerns in both regards. We will coordinate with Michelle Barbieri, Yonat Swimmer, and Summer Martin regarding COVID protocols and protected species concerns on any location (Laysan, Lisianski, or Tern Island) where we plan to access and/or camp.

10. The proposed dates at Pearl and Hermes Atoll have the potential to overlap with a Hawaiian Monk Seal Research Program camp arriving at that time. Considering the need for appropriate distancing for COVID safety and protected species interactions, we recommend the applicant and Resource Monitor closely coordinate with the Hawaiian Monk Seal Research Program (via Michelle Barbieri at Michelle.Barbieri@noaa.gov) regarding camping locations on Southeast Island.

Applicant Response: We'd be very happy to; Amanda and I can liaise with Michelle in advance of the trip. Many thanks. We will coordinate with Michelle Barbieri, Yonat Swimmer, and Summer Martin regarding COVID protocols and protected species concerns on any location (Laysan, Lisianski, or Tern Island) where we plan to access and/or camp.

*NOTE: Due to the situation with *Chondria tumulosa*, the applicant would no longer access Manawai (Pearl and Hermes Atoll)*

11. We kindly suggest using Hawaiian names for place, plants, and animals when feasible in your production. This normalizes the use of 'ōlelo Hawai'i (Hawaiian language) and perpetuates Hawaiian culture. For questions or more information on specific names please contact Kalani Quiocho, Native Hawaiian Program Specialist at kalani.quiocho@noaa.gov.

Applicant Response: Acknowledged, thank you.

Agency Response: OHA appreciates the applicants willingness to use Hawaiian names within their publications for the birds that they will be studying. It is a great step in normalizing Native Hawaiian perspectives and traditions within our activities in Papahānaumokuākea and all of Hawai'i.

12. Would the applicant be open to discussing potentially filming specific areas for management agencies to use for education and outreach purposes, as time allows? This often involves capturing footage in off times when primary subjects are not available.

Applicant Response: We would certainly be open to discussing filming these areas if beneficial and helpful to the Monument. Of course with such a big investment from the series in filming this story, and very limited time in the field that the Searcher can commit to us being 'at station' for filming (due to fuel restrictions), time in the field will be very limited, but if we are able to assist in these efforts we would of course be happy to and will do what we can to achieve this.

13. As a requirement, Papahānaumokuākea Marine National Monument must be mentioned by name in the video and/or credits.

Applicant Response: We would be very happy to include Papahānaumokuākea Marine National Monument in our credits in recognition of the huge amount of help that the Monument have generously given to us. The final approval lies with Netflix at the end of the production, but we do not foresee this being a problem at all.

The activities described above may require the following regulated activities to occur in State waters:

☑ Anchoring a vessel (TBD with Searcher or other vessel used for support platform; see details later) ☑ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since March, 2021, giving the public an opportunity to

comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Environmental Compliance:

NEPA / HEPA: (c	check-one)
\boxtimes	Categorical Exclusion / Exempt Class: 5
] EA
] EIS

Other Consultations/Permits: (ESA/MMPA Section 7; NHPA Section 106, etc.)

- A consultation of all aforementioned activities following section 305(b) of the Magnuson-Stevens
 Fishery Conservation and Management Act (MSA; 16 U.S.C. 1855(b)) is currently underway by
 NOAA National Marine Fisheries Service (NMFS) Pacific Islands Regional Office (PIRO).
 Specific conditions that may result from this consultation will be incorporated into the final permit.
- A request to the National Marine Fisheries Service (NMFS) for a Section 7 informal consultation
 pursuant to the Endangered Species Act of 1973 is underway to analyze the effects of proposed
 activities within the Monument on protected species. The outcome of this consultation may
 require the applicant to adhere to other NMFS-prescribed conditions. Such conditions would be
 reflected in the PMNM permit, prior to issuance.

This activity is exempt from the preparation of an environmental assessment under the Authority of Chapter 343, HRS and Chapter 11-200, HAR. In accordance with the revised Exemption List For The Department Of Land And Natural Resources (Concurred on by the Environmental Council on November 10, 2020), this activity does not require a declaration of exemption or "exemption notice" as this activity falls under "Part 1" of its exemption class. This revision separates exemption lists into categories listed in §11-200.1-16 (a)(1) and (2). Activities categorized as "Part 1" will fall under §11-200.1-16 (a) (1). Activities categorized as "Part 2" will require an exemption notice and fall under §11-200.1-16 (a) (2). However, in order to be transparent for BLNR review purposes, this exemption notice had been drafted.

Consulted Parties:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

<u>Exemption Determination:</u> After reviewing §11-200-8, HAR, including the criteria used to determine significance under §11-200-12, HAR, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

- 1. All activities associated with this permit have been evaluated as a single action. Since this permit involves an activity that is precedent to a later planned activity, i.e., the same study methodology used throughout the permit period, the categorical exemption determination here will treat all planned activities as a single action under §11-200-7, HAR.
- 2. The General Exemption Type #5 for Basic Data Collection, Research and Experimental Management with no Serious or Major Environmental Disturbance Appears to Apply. §11-200.1-16 (a) (1) and §11-200.1-16 (a) (2), HAR, exempts the class of actions that involve "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource." This exemption type has been interpreted to include the filming of terrestrial and marine wildlife to film a natural history series on wildlife movements, migration, and lifecycle activities, such as those being proposed.

The proposed activities here appear to fall squarely under the general exemption type identified under HAR §11-200.1-16 (a) (1) and as described under the revised 2020 DLNR Exemption List (Concurred on by the Environmental Council on November 10, 2020), under the general exemption type #5 (Part 1), item #15, which includes, the conducting of "game and non-game wildlife surveys, vegetation and rare plant surveys, aquatic life surveys, inventory studies, new transect lines, photographing, recording, sampling, collection, culture, and captive propagation."

As discussed below, no significant disturbance to any environmental resource is anticipated. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

3. <u>Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant</u>. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if "the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment." HAR § 11-200-8.B. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. HAR § 11-200-12. Examples of actions which commonly have a significant effect on the environment are listed under HAR § 11-200-12.

On this expedition, the crew will not touch an animal on shore or in the water and will not remove anything from the island or the Monument. The crew will only approach animals on land under the supervision/guidance of the Monument monitors, and will not approach any marine mammals at any time – either on land or in the water. The crew will follow Monument Biosecurity protocols both on land and in water. With this in mind, significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish, but rather enhance monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts, nor did it raise any cultural concerns, that would occur as a result of these activities.

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts will Probably be Minimal and Insignificant.

Again, any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all research activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources of the Monument as required by Presidential Proclamation 8031, other applicable law and agency policies and standard operating procedures.

<u>Conclusion</u>. Upon consideration of the permit to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200 HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.

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Papahānaumokuākea Marine National Monument

SPECIAL OCEAN USE Permit Application

NOTE: This Permit Application (and associated Instructions) are to propose activities to be conducted in the Papahānaumokuākea Marine National Monument. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, provide all information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Papahānaumokuākea Marine National Monument (Monument).

ADDITIONAL IMPORTANT INFORMATION:

- Any or all of the information within this application may be posted to the Monument website informing the public on projects proposed to occur in the Monument.
- In addition to the permit application, the Applicant must either download the Monument Compliance Information Sheet from the Monument website OR request a hard copy from the Monument Permit Coordinator (contact information below). The Monument Compliance Information Sheet must be submitted to the Monument Permit Coordinator after initial application consultation.
- Issuance of a Monument permit is dependent upon the completion and review of the application and Compliance Information Sheet.

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:
NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
nwhipermit@noaa.gov

PHONE: (808) 725-5800 FAX: (808) 455-3093

SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, SEE THE LAST PAGE.

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Papahānaumokuākea Marine National Monument Permit Application Cover Sheet

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

Please see attached additional document that includes officially reviewed/ approved dive plan, underwater risk assessment and emergency evacuation. *

Summary Information

Applicant Name: Tobias Nowlan

Affiliation: Producer, Silverback Films, Netflix Production

Permit Category: Special Ocean Use

Proposed Activity Dates: 20th May – 20th July (conservative window to include duration of 26

day shoot)

Proposed Method of Entry (Vessel/Plane):

Searcher (http://searcherhawaii.com/)

IMUA (under Co-Manager's permit PMNM-2021-001)

Proposed Locations: Southeast Island, Pearl & Hermes Atoll

Lavsan Island

East Island, Tern Island, French Frigate Shoals

Estimated number of individuals (including Applicant) to be covered under this permit: 5 Estimated number of days in the Monument: Estimated 20 days filming + 6 days' travel

Description of proposed activities: (complete these sentences):

- a.) The proposed activity would document the development and fledging of Laysan and/ or black-footed albatross on film, as well as any possible interactions with tiger sharks, as part of a film showcasing the extraordinary journeys undertaken by these North Pacific migratory species.
- b.) To accomplish this activity, we would film the pre-fledging development and final interactions between parent and chick (before fledging) from shore using long lens and stabilized hand-held cameras. We would then film the fledging behavior from shore with powerful long lenses and capture an element of both fledging and shark-albatross

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interaction from the water surface level (from the boat) and underwater. The shoot will predominantly focus on documenting the important moment where black-footed and Laysan albatrosses leave the beach on their maiden voyage (their first flight), and as such the majority of filming will be conducted from a respectful distance away from the chicks on land using the longest lenses in the industry (the use of these lenses enables us to maximize our distance from our subjects while minimizing disturbance). One lesser element of the sequence may require filming of albatross fledging behavior from within the water. This will be using closed circuit rebreather systems (currently consulting all experts closely who have worked at the location and this has been proposed as the safest, least-disturbing and most effective course of action; please see detailed underwater plan).

c.) This activity would help the Monument by demonstrating to a huge global audience the importance of these islands as the principal outpost for the most extraordinary of all of Earth's migratory species. This series will highlight the most important locations on the planet for the world's most notable and threatened migratory animals. These two albatross species (Laysan and black-footed) and the tiger shark are three such species, and among the world's most accomplished travelers. Atolls in the Hawaiian National Monument, including Pearl & Hermes Atoll and French Frigate Shoals are unique in that they host each of these species as important breeding and/ or staging grounds, providing a rare and exceptional platform for interactions that occur nowhere else on the planet. We are eager to reveal the regional and global rarity and enormous significance of this remote and vulnerable location, as well as to feature the challenges that the colony faces in the 21st Century (including the effects of global climate change), demonstrating just what is at stake, and how important it is that outposts such as these are supported and protected. Principally, however, we wish to demonstrate the ecological significance of the Monument and to document the remarkable lives and journeys of these protected species.

Other information or background:

Our Planet on the Move is an exciting new landmark series from Netflix, and is the sequel to their globally renowned series Our Planet, narrated by Sir David Attenborough, released in 2019 – arguably the most ambitious environmental film impact project ever designed. Our Planet on the Move is the next instalment in this franchise, and in 2023 will be released in over 190 countries worldwide, with a global reach of hundreds of millions of people. The series specifically looks at animal movements and migrations – for at any given moment on our planet, billions of animals are on the move. For many it's a migration, an annual trek that will take them thousands of miles across land, sea and air; for others, survival simply depends on never staying in one place, or setting out to find a new territory. Every journey has its own challenges, not least in this modern world where our travelers' routes are blocked, impeded and boxed in, and as habitats are destroyed across ancestral migration paths.

Our North Pacific albatrosses (we will feature black-footed and Laysan albatrosses) are perhaps the most important characters in the entire series, returning multiple times throughout the series as the world's most accomplished travelers. The Laysan albatross, as the oldest living bird on

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Earth, may cumulatively travel more miles in its lifetime than any other bird (and almost any other animal), earning this title as the most impressive of all ocean travelers. We will follow our albatross characters from the reunion of their parents after a year at sea, their lonely, challenging life on the nest as young chicks, and the all-important first flights as they fledge.

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Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): NOWLAN, TOBIAS, E

Title: MR

1a. Intended field Principal Investigator (See instructions for more information): PRODUCER & DIRECTOR: TOBY NOWLAN

2. Mailing address (street/P.O. box, city, state, country, zip): SEE ORIGINAL APP FOR CONTACT INFO

Phone: SEE ORIGINAL APP FOR CONTACT INFO

Email: SEE ORIGINAL APP FOR CONTACT INFO

For students, major professor's name, telephone and email address: N/A

- **3.** Affiliation (institution/agency/organization directly related to the proposed project): SILVERBACK FILMS, PRODUCING 'OUR PLANET ON THE MOVE' FOR NETFLIX
- 4. Additional persons to be covered by permit. List all personnel roles and names (if known at time of application) here (e.g. John Doe, Research Diver; Jane Doe, Field Technician):

TOBY NOWLAN (Producer, Director, Dive Supervisor)

KYLE MCBURNIE (Lead underwater cinematographer)

MATTHEW ROBINSON (lead topside/ surface-based cinematographer)

SAFETY DIVER (TBC, safety diver)

2 X RESOURCE MONITORS/ AGENCY ASSISTANTS

CAPTN JONATHAN LITTENBERG (Captain)

GILLIAN WYSOCK (boat crew)

JULIA HARTL (boat crew)

(1-2 extra crew, TBC)

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Section B: Project Information

5a. Project location(s):		<u>Ocean Based</u>	<u>l</u>
☐ Nihoa Island	Land-based	Shallow water	Deep water
Necker Island (Mokumanamana)	Land-based	Shallow water	Deep water
x French Frigate Shoals	x Land-based	x Shallow water	Deep water
Gardner Pinnacles	Land-based	Shallow water	Deep water
☐ Maro Reef			
x Laysan Island	∠ Land-based	Shallow water	Deep water
Lisianski Island, Neva Shoal	Land-based	Shallow water	Deep water
x Pearl and Hermes Atoll	□ Land-based	Shallow water	Deep water
Midway Atoll	Land-based	Shallow water	Deep water
Kure Atoll	Land-based	Shallow water	Deep water
Other		_	— 1
_			
NOTE: Shallow water is defined by	water less than 10	0 meters in depth.	
,		1	
Remaining ashore on any island	or atoll (with the e	xception of Sand Island at	Midway Atoll
and field camp staff on other islands	`	*	•
•	,		
NOTE: There is a fee schedule for p	eople visiting Mid	way Atoll National Wildli	fe Refuge via
vessel and aircraft.	1 0	•	C
Location Description:			
South East Island, Pearl & Herme	es Atoll Lavsan al	batross colony	
Laysan Island		<i>y</i>	
East Island & Tern Island albatro	ss colony, French	Frigate Shoals	
	ss colony, i renen	ingute anoms	
5b. Check all applicable regulated	activities propos	ed to be conducted in the	Monument:
Removing, moving, taking, harve			
living or nonliving Monument resou			887
Drilling into, dredging, or otherw		bmerged lands other than	by anchoring a
vessel; or constructing, placing, or a	_	_	-
submerged lands			
x Anchoring a vessel (TBD with Sea	archer: see details l	ater)	
Deserting a vessel aground, at an			
Discharging or depositing any m		to the Monument	
Touching coral, living or dead			
Possessing fishing gear except w	hen stowed and no	ot available for immediate	use during
passage without interruption through			ase aarmg
Attracting any living Monument			
Sustenance fishing (Federal water		Special Preservation Area	s Ecological
Reserves and Special Management A		Special Frescrivation Area	is, Leological
reserves and opecial ividinagement i	neasj		

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Subsistence fishing (State waters only)
x Swimming, snorkeling, or closed-circuit SCUBA diving within any Special (currently under advisement as we best-plan the shoot)

6. Purpose/Need/Scope State purpose of proposed activities:

The purpose of the shoot is to film the most significant segment of this newest of Netflix wildlife TV series which focusses on animal journeys (*Our Planet on the Move*). The North Pacific albatrosses are the most important characters in the series. The albatrosses feature in over half of the series across multiple films, as we follow their development from parental courtship to the challenges faced by young chicks to fledging. The migratory species that embark on the most significant journeys across the series are the tiger shark and the Laysan albatross and as such, these species are star characters. At Peal & Hermes Atoll (or French Frigate Shoals as back-up shoot) we hope to capture on film the most important chapter of these star characters' journeys; the moment of fledging for the Laysan and black-footed albatross chicks (and the moment they embark on a lifetime of being on the move), and tiger sharks which have traveled across an ocean to arrive at French Frigate Shoals and Peal & Hermes specifically for this moment. The footage we hope to capture at PH or FFS will form the most significant segment of the series, both in terms of screen-time and story, and is therefore arguably the most important shoot of the series.

*Considering the purpose of the proposed activities, do you intend to film / photograph federally protected species? XYes No

If so, please list the species you specifically intend to target. Only **green sea turtle** (currently listed by the ESA (26th Oct 2020))

For a list of <u>terrestrial</u> species protected under the Endangered Species Act visit:

http://www.fws.gov/endangered/

For a list of marine species protected under the Endangered Species Act visit:

http://www.nmfs.noaa.gov/pr/species/esa/

For information about species protected under the Marine Mammal Protection Act visit: http://www.nmfs.noaa.gov/pr/laws/mmpa/

7. Answer the Findings below by providing information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Monument:

The Findings are as follows:

a. How can the activity be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument?

The crew will maintain a respectful distance from any filming subject. By using the industry's highest resolution cameras and the industry's most powerful long lenses (Canon CN20 50-

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1000mm), we will be able to film intimate, natural behavior of our subjects whilst keeping our distance and minimizing disturbance. It is imperative that our series captures only natural behavior that is uninfluenced by our presence in any way. The crew are highly experienced in monitoring and observing animal behavior from afar whilst working in the field and as such would be able to quickly detect any signs of stress (in instances where subject species are particularly sensitive and prone to disturbance even when observed from afar). The crew have worked with multiple threatened seabird and shark species on many occasions and are highly experienced at filming these subjects effectively while maintaining minimal disturbance.

We will be living on-board our charter vessel for the duration of the shoot (on board which we will also charge all batteries, download media, and organize equipment), and as such our impact and footprint on shore will be almost zero. Whilst filming on land, equipment will be kept to a bare minimum – for the majority of the time we will be using the very simple but highly effective set up of a tripod, a RED camera, and a Canon CN20 lens. We will endeavor to minimize the amount of equipment and personnel on shore at all times. If we're able to access Laysan via the IMUA, we'll camp ashore with USFWS staff until the Searcher picks us up within 7 days of being dropped off.

At no point will we seek to touch an animal on shore or in the water. We will not remove anything from the island or the Monument, and will remove everything we bring with us. We will only approach animals on land under the supervision/ guidance of our Monument monitors, and will not approach any marine mammals at any time – either on land or in the water. We will follow Monument Biosecurity protocols both on land and in water.

We may wish to film a few shots of green turtles hauling up on shore to rest/ on the beach in preparation to nest. This would be under the advisement of attending Monument resource monitors and we would closely follow Monument protocols.

Using scuba diving to film the underwater segment of the sequence will be done with extensive planning, use of a safety diver and dive supervisor, with several sets of eyes above water and below on the crew and the subject at all times (see attached detailed Dive plan summary,).

The crew are the most experienced videographers in the industry, having made the highest-end wildlife films for the BBC, National Geographic and Netflix over the last 20 years (including *Planet Earth, Planet Earth II, Blue Planet* and *Our Planet*). We have extensive experience working in pristine, fragile and remote locations that are especially sensitive to disturbance. We only work with crew that show the utmost respect to any location where they film and to any species they work with or near. The purpose of the series is to educate a huge global audience about the fragility, complexity and vulnerability of the most significant migrations, locations and animal gatherings on Earth. As such, it is a key remit that the effects of our series and our output help increase protection and conservation of our natural environment, and have no negative impact on the places or species we film.

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b. How will the activity be conducted in a manner compatible with the management direction of this proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument cultural, natural and historic resources, qualities, and ecological integrity, any indirect, secondary, or cumulative effects of the activity, and the duration of such effects?

The film only hopes to document, celebrate, and showcase the natural diversity, richness and ecological significance of the Monument.

We are greatly looking forward to the Cultural Resources briefing upon arrival, and will enjoy learning, appreciating and respecting local cultural knowledge and teachings. We consider being aware of cultural context and history an imperative aspect of working in remote locations.

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument.

The remote outpost breeding locations for these two albatross species, the albatross colonies' newfound vulnerability from climate change-induced 'washover' events, and the predation behavior observed by tiger sharks make these atolls the only possible locations on the planet to film the story. The Hawaiian National Monument is unique in that it is the only location on the planet where tiger sharks have been regularly recorded predating albatross chicks. As such, it is the only possible location where we can hope to film possible interactions between these remarkable long-distance migrants. Pearl & Hermes Atoll is currently undoubtedly the best location to observe and hope to film this predation behavior, as it occurs very close to shore there.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?

We anticipate no adverse impacts on the island's resources or ecological integrity. Indeed, we only hope to visually showcase its importance and newfound vulnerability in the face of an increased annual frequency of storms and rising sea levels.

e. Explain how the duration of the activity is no longer than necessary to achieve its stated purpose.

We will be present for a section of pre-fledging development and the duration of the peak albatross chick fledging window, as advised by biologists and experts from the Monument, and as informed by a small team that was present at the island this year. We will not stay longer than is necessary to capture this behavior on film. We can gladly adjust the filming dates of the shoot if need be following further discussions with the PMNM, though we are closely planning the dates by consulting with biologists Beth Flint, Jon Plissner, Jon Brack and Hope Ronco, other ornithologists and Monument staff (including Daniel Link and Amanda Boyd), and with other filmmakers, captains, and divers who have worked in the area.

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f. Provide information demonstrating that you are qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

Please see attached CV (resume). The crew have over 50 years' combined experienced filming wildlife in remote and pristine locations, including working with both Endangered seabird and shark species. Our award-winning cameraman has spent his life filming sharks underwater (as well as running a successful shark-diving company) and is based in Hawaii (see further details on Kyle's experience below). The producer has worked with Endangered albatross and shark species in many locations around the globe. We have filmed rare and threatened species in remote locations for the highest-end landmark wildlife TV series that have been broadcasted over the last 10 years, including *Planet Earth II, Our Planet*, and most recently Sir David Attenborough's *A Perfect* Planet (to be broadcasted in January 2021). Our teams have filmed tiger sharks and albatrosses at French Frigate Shoals several times for some of the major series over the past 15 years, including the BBC's *South Pacific* and the *Blue Planet* (though we anticipate this series will have an even greater global reach and effect than all of these series). The producer also leads research expeditions in search of the planet's most Endangered and threatened species and is used to working in remote locations with conservation and low-impact research as top priorities.

Please see attached detailed Dive Plan and Underwater Risk Assessment for further information.

Kyle McBurnie (underwater cameraman) further info:

Kyle McBurnie is an underwater wildlife cameraman with ten years of experience filming and running marine expeditions specializing in shark-diving. For five years Kyle co-owned and operated a vessel running blue and mako shark diving trips in San Diego (2013-2018) during which he operated as a USCG certified captain to responsibly and respectfully view blue and mako sharks in the water off the California coast. Recent work includes National Geographic's America Series, Netflix's Our Planet, BBC's Planet Earth 3 and Life of Mammals 2, and Serengeti Rules.

Kyle worked underwater with large pelagic sharks hundreds of times over the course of the past 10 years. This experience includes blue and make sharks off San Diego, bull sharks in Fiji, bull sharks in Mexico, Galapagos sharks in Hawaii, tiger sharks in Hawaii and extensively with great white sharks in Guadalupe and California (all of these examples were with a camera and without a cage). During these shark-diving experiences, Kyle was either the primary camera operator (most instances) or lead in-water safety diver (for white sharks at Guadalupe, makes and pelagic hammerheads off San Diego, and tigers in Hawaii). Kyle used chain mail suits during specific instances, principally with large blue and make sharks during large feeding events. He is a PADI certified Open Water Scuba Instructor, a rEvo certified rebreather diver with 150+ hours logged underwater, an AAUS certified scientific diver (currently with Scripps Institution of Oceanography), and has acted as DSO for various productions and has helped manage safety for diving expeditions in tropical areas, as well as temperate California waters all the way to managing dive plans and safety in the Aleutian Islands on a REMUS-oriented scientific

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expedition. Kyle is incredibly experienced not only at filming large, pelagic sharks underwater, but in training people how to safely interact with these shark species underwater. Kyle has over 500 hours filming marine animals underwater, and has spent his career learning and understanding shark behavior in order to operate safely within their presence, and has never had an incident in the water.

Please see attached detailed Dive Plan and Underwater Risk Assessment for further information.

Matthew Robinson (Topside/ surface cameraman): Matthew is a highly experienced wildlife cameraman who has recently specialized in filming seabirds. His work has been included in multiple high-end BBC productions including *Springwatch*, *Autumnwatch*, and National Geographic productions including '*Okavango: A flood of life*'. Other specialties include aerial, timelapse, motion-controlled and stills photography. Matthew will be filming the topside predation behavior and pre-fledging portraiture of the albatross chick (as well as parental visits for the final feeds).

Toby Nowlan (Producer/ Director): For the last 10 years Toby has worked on the most successful and widely seen landmark natural history productions, including BBC *Planet Earth 2*, Netflix *Our Planet*, and most recently the BBC's *A Perfect Planet* (currently being broadcasted). Before working in natural history television Toby led research expeditions around the planet, focusing on conservation of the world's most Endangered species, including award-winning expeditions to photograph the Critically Endangered Javan rhino and the vaquita porpoise. He was shortlisted for the Rolex Young Laureates Award for his conservation work on Indonesian coral reefs, and was awarded the BBC Young Environmental Journalist of the Year. Toby is a passionate diver, conservationist, and film-maker.

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

Our Netflix series is very well financed; we have appropriately high budgets in order to allow us to achieve the most ambitious natural history filming in the industry. This allows us to use the very best resources and to devote adequate time to being in the field in order to capture unique and entirely natural behavior.

h. Explain how your methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to Monument cultural, natural and historic resources, qualities, and ecological integrity.

As discussed above we will minimize the amount of filming equipment taken ashore. We will film from the boat as well as on land and in the water. We will use the highest calibre equipment in the industry that we currently employ to film wildlife across the globe in a very wide range of habitats. Both by using the latest, lightest weight technology and by thinking carefully about minimizing our equipment (keeping it appropriate to the scale of the shoot given the small crew size and sensitivity of the location), we will further reduce any impact of our presence during the

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shoot. All filming will strictly avoid all contact and interference with natural subjects or processes.

i. Has your vessel been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031?

Yes

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.

We have not been refused any other permits for any other sequence in the series, and I can gladly demonstrate many other instances in similar locations around the globe where we have filmed our natural history subjects with the highest level of ethical adherence, cooperation with local partners, strict planning and adherence to safety protocols, benefits to local conservation projects/ partners.

8. Procedures/Methods:

We would typically film from the boat (with a small, gyro-stabilized gimbal), from the shore and platform (with a RED 8K cinema camera, a CN20 (Canon 50-1000mm) lens and a tripod), and from within the water using rEvo diving with a smaller cinema camera (Possibly Panasonic S1H) in a waterproof housing.

The camera and underwater housing system used will be a RED Gemini with Nauticam housing. Additionally, we plan to bring a small Panasonic S1H camera system to use on a pole-cam. This would be operated from the RIB and would provide us the option of obtaining some of the underwater footage without entering the water.

The crew will be staying on The Searcher overnight (using the vessel as a liveaboard) for the duration of the shoot. All crew members listed request permission to come ashore each day for a short period in consulting with the Monument resource monitor.

Please see attached detailed Dive Plan and Underwater Risk Assessment for further, detailed information.

Topside filming:

This will be combined from onshore filming and using a small platform, supported by short scaffolding. This will allow our topside cameraman to film (using RED 8k camera on Atlas 40 head and Carbon Fibre tripod) the albatrosses fledging and the tiger shark predation from above the surface. This methodology was used on all major BBC filming shoots; these crews have advised us that this is by far the most effective and least disturbing way of filming the behavior from above the surface.

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We have consulted extensively with all of the BBC film crews that previously filmed the same behavior at French Frigate Shoals for major BBC wildlife landmark series. We have taken the learning and knowledge gained from their experiences [with the tiger sharks and albatrosses at FFS] and used them to construct what we believe to be the most well-informed shoot plan, built on their years of learning and experience.

We would like to also film a small amount of footage of green turtles hauled out on shore with our long lenses from a respectable distance for another segment of the series (in which green turtles are another 'star travelling character') whilst working on shore on Southeast Island, Pearl & Hermes (under advisement of Monument staff and protocols).

In addition to principle set up (tripod and long lens), Matthew and Kyle may use one of several very compact stabilized systems (e.g. handheld Ronin S or slider) to film some details on shore.

Chick development filming:

We would like to also film the earlier chapter of the Laysan albatross chick's story. This will include filming of the albatross chick on or near the nest for several weeks once or at several points between March and July (depending on the advice of lead albatross researchers). Currently the most likely location for us to film this part of the story is Laysan Island, as part of the same shoot to film fledging and predation. The focus would be to film the chick on its own while its parents are out at sea foraging, the chick as part of the entire colony of many chicks, and final parental interactions with the chick (when the parents return with food). Filming of this part of the story will be achieved using a principle topside long lens camera work (to cover most of the behavior and interaction with parents from a distance) and stabilized tracking techniques using compact handheld systems for details on shore. Filming near the chicks would at all times be under the advisement of the official Park Monitors with whom we will be supervised throughout the shoot, and will welcome their guidance throughout. This section of the film will be very likely filmed at Laysan Island, and possibly again at a later date (perhaps in 2022) at other Laysan colonies in the monument (such as Midway Atoll or Kae'na Point under separate permits).

Transit and Access to Laysan Island & Pearl & Hermes atoll:

We aim to travel with our crew on The Searcher from Honolulu to Laysan Island in late May/ early June 2021 (unless the IMUA is able to drop off on Laysan with USFWS staff on the June 17th Imua trip). We hope to then be stationed there for 4 -14 days to film the pre-fledging behavior of the Laysan albatross chicks, including the final visits from the parents to feed their chicks and all challenges that the chicks face during this period. The filming during this period will only be topside, with no diving filming. (If the IMUA drops off 2-3 crew to film at Laysan, the Searcher will pick up the crew on the way to Pearl and Hermes). We then aim to travel on to Pearl & Hermes Atoll to film the fledging behavior of the chicks and predation of the chicks by tiger sharks, with both a topside team and an underwater team. We hope to be stationed off Pearl & Hermes atoll for 5-25 days' filming. During this time, the crew will be staying on board The Searcher, using it as a liveaboard vessel, and using a RIB to come ashore each day to film the albatrosses and tiger sharks.

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Anchoring & mooring at Pearl & Hermes:

Captain Jon Littenberg has spoken to other boat operators who are very familiar with anchoring in the area. They are confident that The Searcher will be able to access the lagoon at Pearl & Hermes (through the ship channel) where we can drop anchor. Depending upon what a visual inspection determines upon entry to the lagoon, we would either take a hard right or left immediately upon entering the lagoon, and then once out of the current flow of the channel, find a suitable spot for anchoring. We would go the minimal safe distance into the lagoon. Jon anticipates this would be probably just northwest of bird island. We would also like to request permission to set up a temporary mooring in the event that we are unable to access the lagoon and anchor. Jon has done this at other locations throughout the moment, whereby he locates a suitable site (ideally a large rock or volcanic protrusion, that has no coral growth on it, in an area clear of other coral, in relatively shallow water), then ensnare the rock with a cable that leads to our anchor line. It is often a less disruptive method to anchor the vessel as we can get a precise placement (compared to using the traditional anchor method, which can potentially drag in shifting winds or currents).

Possible shared access to Laysan/ Pearl & Hermes:

There is a National Monument/ FWS/ NOAA expedition going from Honolulu to Midway Atoll on June 17th, returning June 28th. It may be that we are able to collaborate with the expedition and coordinate the sharing of transport for our outbound journey as this expedition passes Laysan Island and Pearl & Hermes Atoll; discussions are ongoing with Monument officials and biologists as to whether this may be a possibility.

NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding.

9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary): NONE/NA

9b. What will be done with the specimens after the project has ended?
☐ Whole Organism ☐ Partial Organism
Collection location:
& size of specimens:
Scientific name:
Common name:

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follows:

RED 8K camera with media

GATES underwater housing

V-Lock batteries (8)

9c. Will the organisms be kept alive after collection? L Yes No
• Specific site/location:
• Is it an open or closed system? Open Closed
• Is there an outfall? Yes No
• Will these organisms be housed with other organisms? If so, what are the other organisms?
• Will organisms be released?
10. If applicable, how will the collected samples be transported out of the Monument? $N\!/\!A$
11. Is your proposed activity based on a State Department of Education Standards Based Curriculum? If so, describe:
12. If applicable, describe how you are collaborating with others in any way to reduce duplicative activities in the Monument or elsewhere? We will be using a local camera operator and working with a local charter vessel with local crew We are combining the filming of multiple sequences on a single shoot (story of albatross fledging and albatross development/ parental interactions to economize and make the most of our presence in this remote location) and avoid the necessity for an entire second return shoot.
13. What materials, products or deliverables will be developed as a result of your proposed activity? Provide a time-line for write-up and publication of information or production of educational materials:
The series will be filmed throughout 2021 and early 2022. It will be edited in the summer of 2022 and broadcasted on Netflix in 2023.
Audience viewing figures for the prequel to this series achieved a global reach of hundreds of millions worldwide, and the series was streamed in 190 countries. It is hoped and anticipated that this series will achieve a similar global reach.
14. List all specialized gear and materials to be used in this activity:

SPECIAL OCEAN USE 15

This list will be subject to change, but a likely basic list of the main equipment would be as

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Canon CN20 lens

Several wide Canon EF lenses (e.g. Canon 24mm, 16-35mm)

Panasonic S1H (with Salty Surf underwater housing)

Batteries and charging stations for each camera

Carbon fibre medium length tripod

Small Manfrotto video tripod

Atlas 40 tripod head

Small gimbal (e.g. Ronin S)

Small slider (e.g. Edelkrone Pro)

Mavic Pro 2

CCR rebreather dive gear x 2

Laptop and drives (to download media)

Vessel details:

Searcher

Captains' name: Jonathan Littenberg, Gillian Wysock

IMO#:8981884 Vessel ID#: 1103056

Flag: USA

Vessel type: steel trawler Call sign: WDA6100

Embarkation port: Kewalo Basin, HNL, Hawaii

Last port vessel will have been at prior to this embarkation: Kewalo Basin, HNL HAwaii

Length: 96'

Gross tonnage: 105

Total ballast water capacity volume (m3): n/a Total number of ballast water tanks on ship: n/a

Total fuel capacity: 9600 gal

Total number of fuel tanks on ship: 6

Marine Sanitation Device: MSD Headhunter marine

Type: II

Total ballast water capacity volume (m3): n/a Total number of ballast water tanks on ship: 0

Total fuel capacity: 9600 us gal

Total number of fuel tanks on ship: 6

Marine Sanitation Device: Yes, headhunter marine

Type: II

National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS) name, type and number:

thrane and thrane sailor

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VMS Email: 436998398@c.xantic.net

Inmarsat ID#:4tto92e62b15

Personnel, gear and materials will be transported to shore using the following tenders/skiffs and specific types of motors:

Zodiac mark v (90 horsepower honda), Zodiac Mark V (60 horsepower evinrude)

15. List all Hazardous Materials you propose to take to and use within the Monument:

All black and grey waters shall be stored in holding tanks until our departure from Monument waters. All rubbish and recycling shall be securely stored aboard for proper disposal upon our return to Honolulu.

Other fuel/hazardous materials to be carried on board and amounts: small amounts of gasoline for the outboards on the skiffs, approximately 30 gal.

16. Describe any fixed installations and instrumentation proposed to be set in the Monument:

N/A

17. List all Applicants' publications/references directly related to the proposed project:

Relevant series the crew have worked on or are currently working on and are yet to be broadcasted:

Our Planet (Netflix)

Explorers in the Field (National Geographic)

Queens (National Geographic)

America (National Geographic)

Planet Earth II (BBC)

Blue Planet II (BBC)

A Perfect Planet (BBC)

South Pacific (BBC)

Castaways (DCI)

North America (DCI)

Dancing with the Birds (Netflix)

Planet Earth (BBC)

Wild Arabia (BBC)

Pole to Pole (BBC)

Shark Week (DCI)

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With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as "confidential" prior to posting the application.

Non

21st January 2021

Signature

Date

SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE BELOW:

NOAA/Inouye Regional Center NOS/ONMS/PMNM/Attn: Permit Coordinator 1845 Wasp Blvd, Building 176 Honolulu, HI 96818

FAX: (808) 455-3093

DID YOU INCLUDE THESE?

X Applicant CV/Resume/Biography

X Intended field Principal Investigator CV/Resume/Biography

X Electronic and Hard Copy of Application with Signature

X Statement of information you wish to be kept confidential (included below)

N/A Material Safety Data Sheets for Hazardous Materials

STATEMENT OF INFORMATION REQUESTED TO BE KEPT CONFIDENTIAL:

The broadcaster (Netflix) would be grateful if all information regarding the mention of Netflix, of the series name/ title, any of the series' intentions with regards to this shoot and the locations we hope to film, broadcast dates, mentions of budgets, are kept confidential if possible. The series is confidential, and Netflix would gratefully appreciate it if this could be respected. If possible, please also keep the 'More info/ background' section confidential. Thank you.

Living Planet Productions Ltd: Our Planet on the Move Diving Risk Assessment Form

NB: Personal information collected for the purposes of risk assessment will be used to identify those at risk, and those involved in controlling risk, from this or similar activities and to fulfill First LOOP Productions obligations under Health and Safety policy and legislation. It will be retained for up to 6 years after the expiry of the activity. It may be shared with other organizations, including our agents and contractors, with whom the risk or the control of risk is shared.

US COASTGUARD (24/7): +1 808-535-3333

Company	Living Planet Productions Ltd							
Business Unit / Production Address	SEE ORIGINAL APP FOR CONTACT INFO Location Tel:		Toby Nowlan SEE ORIGINAL APP FOR CONTACT INFO					
Start date of coverage	9 th May 2021	End date	30 th July 2021					
Distribution Who gets a copy of the assessment	Alastair Fothergill / Keith Scholey / Jane Hamlin / Helen Healy / Tash Dummelow / Vicky Singer / Huw Cordey / Ed Charles / Kyle McBurnie / Kimberley Jeffries/ Alex Wickens / Matthew Robinson / Katy Fraser / Oliver Scholey / Jon Littenberg/ Neil Brock / 1st Option Safety / Carey Nicholson — Quartz Insurance / File							
Trip No & Name:	Episode 2 – Albatrosses &							
Outline of risk assessment	**All issues concerning CC	VID-19 are covered	in the topside PRA**					
Summary of what is proposed	Toby Nowlan and Matthew Robinson will be travelling from the UK to Hawaii where they will meet with Kyle McBurnie and skipper Captn Jon Littenberg of the Searcher. From Oahu Island they will travel in the Searcher to Pearl & Hermes atoll to film the fledging of Laysan and black-footed albatross chicks, and the predation of these chicks by tiger sharks. The filming will consist of topside behaviour (Matthew will film topside) and underwater behaviour (Kyle will film underwater). The primary dive team will be Kyle (camera operator), Toby (dive supervisor), Kimberley Jeffries (safety diver). Both divers (Kyle and Kimberley) will be on Closed Circuit Rebreather. We will be joined by two official safety monitors from the National Monument, who will be able to assist as surface safety observers. One of the topside team (Monument monitors/ boat crew/ Matthew) will be designated to assist in an emergency (becoming the 4 th person of the dive team). Dive days will take place roughly between 6am and 1pm, with the majority of fledging and predation behaviour happening early in the morning. The crew will also have a polecam with them and will have the option of using this (from a RIB or the Searcher) in place of diving if it appears to be productive on location. TRAVEL INFORMATION							

The crew will be working with local boat operator Captn Jon Littenberg, skipper of The Searcher vessel. Jon has worked with all other crews that have previously filmed this behaviour, including BBC (South Pacific and Life Story) and National Geographic crews; he is undoubtedly the most experienced at supporting dive crews filming this specific behavioural interaction. The Searcher is based in Oahu and is undoubtedly the most experienced vessel working with film crews on these remote atolls.

The film crew (3), safety diver / coxswain, and skipper (2), and additional park safety monitors (2) make a crew of 7 (possibly 8 if Jon brings a second boat crew).

Dives will be taking place almost always from shore, and within very shallow water – typically 5 metres (to a likely maximum of 10 metres) deep. There is a possibility that we may wish to occasionally dive from The Searcher, using boat entry, but this is unlikely since the behaviour typically happens just a few metres offshore.

Diving will occur on South East Island of Pearl & Hermes Atoll, in the Hawaiian National Monument.

While Kyle and the safety diver are in the water, Toby (the Dive Supervisor) will provide surface cover from the boat (from a small RIB) or onshore. One of the topside team (Monument monitors/ boat crew/ Matthew) will be designated to assist in an emergency (becoming the 4th person of the dive team).

Kyle will be using a RED Gemini in a Gates housing.

The expected water temperature is 20-27°C. Dive crew will be bringing their own, personalised wetsuits to use on location.

We anticipate a variety of conditions. The remote atoll frequently experiences strong winds, though our close-to-shore diving should not be too adversely affected by light to moderate winds.

On-location contacts:

Toby will have a satellite phone and InReach messaging device available to him at all times in case of emergency. Numbers:

The Monument monitors will also have a satellite phone and InReach messaging device available to them at all times. Numbers:

The Searcher satellite phone number:

The Searcher VHF radio:

<u>US COASTGUARD (24/7): +1 808-535-3333</u>

Team members / experts / contractors / contributors etc.

List those involved

On boat / dive team:

Toby Nowlan – Director & dive supervisor: SEE ORIGINAL APP FOR CONTACT Kyle McBurnie – Underwater cameraman: SEE ORIGINAL APP FOR CONTACT Safety Diver: SEE ORIGINAL APP FOR CONTACT

Other crew:

Matthew Robinson - Topside camera: SEE ORIGINAL APP FOR CONTACT Jon Littenberg - Skipper: SEE ORIGINAL APP FOR CONTACT National Park safety monitors - safety observers

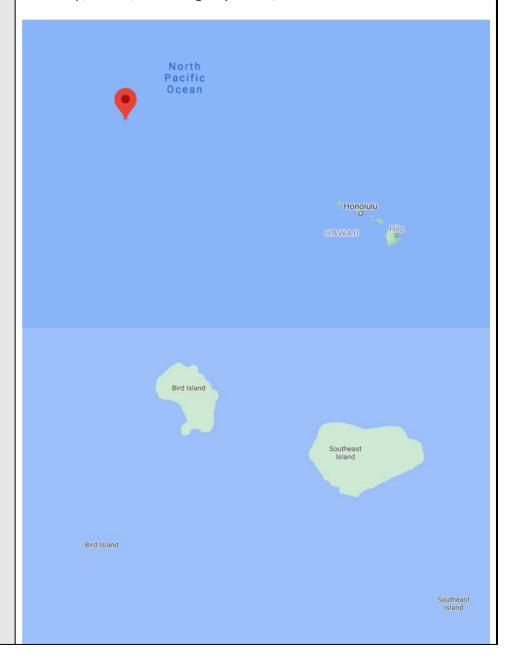
Locations

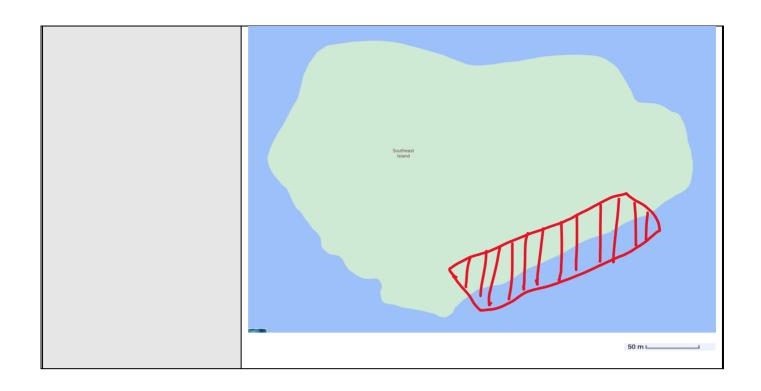
Outline locations involved – indicate any which are hostile environments

Hawaii is not considered a hostile environment.

Pearl & Hermes Atoll is a pristine location located in the Papahānaumokuākea Marine National Monument, Hawai'i, USA.

Diving will occur on South East Island of Pearl & Hermes Atoll, in the Hawaiian National Monument. The predation behaviour is well-photographed and documented at this location. Pearl & Hermes is a very remote location, however it is within a day's boat journey from Midway Atoll, where there is an airstrip, a town, and emergency rescue/ health facilities.





Hazard list					
Situational hazards	Tick	Physical / chemical hazards	Tick	Health hazards	Tick
Diving/Breathing compressed gas	Х	Contact with cold liquid / vapour		Disease causative agent	
Attack by animal	Х	Contact with cold surface		Infection	Х
Drowning	Х	Contact with hot liquid / vapour		Allergic reaction	
Cold environment		Contact with hot surface		Lack of food / water	
Hot environment	Х	Electric shock		Lack of oxygen	Х
Slippery surface	Х	Explosive blast		Physical fatigue	Х
Trip hazard	Х	Explosive release of stored pressure	Х	Repetitive action	
Crush by load	Х	Fire	Х	Static body posture	
Entanglement	Х	Hazardous substance	Х	Stress / anxiety	
Vehicle impact / collision	Х	Ionizing radiation		Venom poisoning	
Object falling, moving or flying		Laser light			
Manual handling	Х	Lightning strike		Environmental hazards	
Obstruction / exposed feature		Noise		Air pollution	
Trap in moving machinery		Non-ionizing radiation		Noise / vibration / light / odour nuisance	
Falls from height		Stroboscopic light		Physical damage to heritage sites	Х
Sharp object / material		Vibration		Damage to natural environment and wildlife	Х
High atmospheric pressure	Х			Oil and chemical spills	
Assault by person		Managerial / organisational hazards		Storage and disposal of waste	
Shot by firearm		Management factors (lack of communication, co-operation, co-ordination, competence)		Water pollution	

Please refer to Risk Assessment Notes and Diving Guidelines when filling in this form.

Flying - Flying or travelling to altitude - including climbing mountains - before or after diving can give rise to or increase the risk of decompression illness. As a result, a no-fly/dive time **must** be introduced. This can depend on the flight time and height attained, however, as a general rule:

- Before diving, leave at least 12 hours to avoid dehydration.
- AFTER DIVING, ALLOW AT LEAST 24 HOURS BEFORE FLYING.

Details of Diving Activity planned: Crew will be diving in Coco Bay using rebreathers. The dives will be performed in buddy pairs.

Hazards identified: Diving/Breathing compressed gas; Drowning

Diving accidents including drowning, decompression sickness or arterial gas embolism (a real risk while filming, particularly in shallow open water).

Risk:

All the usual risks associated with SCUBA diving.

Common signs and symptoms and pressure-related injuries include (but are not limited to):

- Chest pain
- Voice change
- Fullness of throat
- Crackling of throat
- Shortness of breath
- Extreme fatigue
- Numbness/tingling
- Joint pain/discomfort

- Dizziness
- Nausea
- Paralysis
- Convulsions
- Loss of consciousness
- Unresponsiveness
- Loss of motor control
- Tightness in chest

Control measures:

Divers:

- The in-water crew will comprise cameraman Kyle and Kimberley. The twoperson team in the water will act as a buddy pair.
- Kyle and Kimberley are qualified, highly experienced CCR divers (see Diving Personnel for qualifications) and will dive well within limits to avoid DCI.
- Divers will have a dive computer at all times to track diving activities ensuring that diving is kept within safe limits and the pair will dive in accordance to the requirements of the most conservative diver.
- All diving will take place no deeper than 15m with the majority within 5m.
 There will be no decompression diving. Divers will perform a 3 min safety
 stop at 5m on every dive (if deeper than 5m) as instructed by their dive
 computers.
- Divers will be vigilant to not hold their breath as this can risk lung overexpansion.
- Divers will not perform any breath hold or free diving after diving.
- Divers will be adequately rested and will not overexert themselves.
- The risk of DCI is increased by dehydration. The divers will be careful to drink enough throughout the day to avoid becoming dehydrated.
- Divers will monitor each other and be frank in any concerns/ailments, not hesitating to abort diving when required.
- Divers will make pre-dive buddy checks.
- Divers will each carry a DSMB at all times, which they can inflate in the case of an emergency or in heavy boat traffic.
- Additional pre-dive checks will include:

- Check medical O2 on board The Searcher and/ or on shore.
- Check there is plenty of water to drink
- Agree and check diver recall signal
- When filming, there is a risk of bounce-diving if divers are repeatedly and quickly descending/ascending. To avoid this, each dive will be carefully planned to occur at optimum times and at optimum locations. The dive plans will consist of remaining in one place, in very shallow water, however, and waiting for the behaviour. As such bounce-diving is unlikely on this shoot.

Surface Support Crew:

- The in-water crew will be assisted by a boat-based support crew consisting
 of dive supervisor Toby Nowlan on board a RIB or The Searcher, depending
 on dive depth. Toby and boat crew (Jon), can also provide support as 02
 providers and first aid. Two official park monitors will provide additional
 safety support as surface observers.
- The diver supervisor will provide surface cover looking out for inflated DSMBs or the safety diver ascending to indicate to the boat.
- For the majority of times, the dive supervisor and surface support crew will be able to see both the divers and sharks in the vicinity, given that the water is so shallow.
- A first aid kit and 100% Pure O2 with two masks (free flow/demand in the event of a breathing or non-breathing casualty) will be available at all times on the boat during diving activities. The emergency oxygen kit has a manual valve bag resuscitator that can aid resuscitation. There will be sufficient O2 to get the divers to shore and/ or to Midway Atoll via the Searcher for further evacuation via DAN.

Recovering an unconscious diver:

In the event of an unconscious diver, the buddy will bring the casualty to the surface and pull them to shore, or to the side of the boat (if closer). The 02/first aid provider will hold onto the casualty from the boat while the buddy removes the casualty's BCD and cylinder. They will then guide the buoyant casualty to shore (or lift the casualty onto the boat if much closer, assisted by the buddy from the water or from the boat). Toby, Kimberley and park monitors will be on hand to assist if needed on shore/ on board. The dive supervisor will coordinate the first aid treatment and medical evacuation (see 21 Recompression and Evacuation).

COVID-19: There is currently an ongoing global COVID-19 outbreak, a respiratory disease that can make diving extremely hazardous if divers are infected. If any crew diving or shore support show symptoms of COVID-19 diving activities will be halted immediately. Please see topside PRA for extensive COVID-19 risk assessment. Temperature checks and the DAN medical questionnaire will be performed on a daily basis as part of pre dive checks with the divers.

Details of Diving Activity planned:

Diving with Closed Circuit Rebreathers (CCR)

<u>Hazards</u>: In addition to the risks concerning diving, described above, all the usual hazards associated with Rebreather diving, predominately hypercapnia, hypoxia and hyperoxia, as well as caustic soda formation from flooded scrubber canisters.

Risk level:

If any of the above occurs it can be extremely dangerous and the diver can lose consciousness, which can quickly lead to death.

Control measure:

All rebreather divers are experienced CCR divers. Every CCR diver carries bailout gas, which they will switch to in case of signs of problems. CCR dives are always done with an in-water standby diver, also on CCR. They will follow standard predive checks to ensure that their rebreathers are functioning properly, as checked off by the Dive Supervisor.

There is a risk of hypercapnia from over-exertion. Divers will remain aware of this risk, and if they feel any signs of hypercapnia they will bailout, stop swimming to try to regain control of their breathing, call the dive, send up an SMB and ascend as a team.

Divers are also at risk of hypercapnia if they pack their scrubbers incorrectly. Scrubbers will be packed properly.

If a CCR floods it can cause caustic soda formation from the sofnolime in the scrubber canisters reacting with water. If a CCR floods, or the diver suspects significant water has entered the unit, the diver will bail out and call the dive. If the diver is experiencing any symptoms of caustic burns medical treatment will be sought.

The diving we are planning may involve long durations spent underwater, however all diving will follow NOAA CNS/OTU tables to prevent oxygen induced myopia becoming an issue. We expect to be diving for an average of 3-5 hours/day. CCR diving reduces (but doesn't eliminate) the risk of DCI. CCR diving does present a risk of O2 toxicity from prolonged exposure to high PPO2. A set point will be chosen by the Lead Dive Planner, and agreed by all CCR divers in the team, to find an optimum balance that reduces the risk of DCI and O2 toxicity. All CCR divers are using shearwater dive computers and will continually monitor their tissue compartment saturation and CNS build up during dives and will cross reference this with NOAA tables in respect of CNS loading and OUT's and then adjust set point as required. If a down day is required to reduce either exposure one will be taken and will be taken regardless after 7 days of consecutive diving.

Dive supervisors will know how to deal with specific issues that arise from rebreathers, as well as standard SCUBA-related injuries. There will always be a CCR unit available to give 100% 02 to a conscious diver if this is ever required for a conscious casualty, as well as medical O2 for unconscious divers (see earlier note on non-breathing casualty and evac plan).

Lead dive planner: Kyle McBurnie is an incredibly experienced CCR diver, and as such he will be the lead dive planner for this shoot. Dive plans will be agreed on by all divers and the dive supervisor prior to diving, and adhered to during dives.

Safety Diver: Kimberley Jeffries has experience to do the job that is being asked of her on this shoot. She will avoid task loading, and dive well within her experience limits
experience limits.

Details of Diving Activity Planned:

Hazard Identified: Attack by tiger shark

Attack by animal

Risk:

We will be hoping to be in the water with tiger sharks that have migrated to the atoll just for these two weeks, having timed their arrival exactly with the fledging of the albatross chicks. The tiger shark (*Galeocerdo cuvier*) is a large macropredator, and can attain lengths greater than 5 metres. Attacks on humans are rare and thought to be largely unintentional, but the species is capable of deadly attack on human beings and individuals vary in the degree of aggressive behaviour they exhibit. The chances of encountering tiger sharks at close range are very high.

After talking extensively with all other film crews that have previously worked at the location to film this specific behaviour, as well as staff from the National Monument, it is clear that tiger sharks are known to be very timid at this location and difficult to approach. None of the crews reported any signs of aggressive behaviour from any of the tiger sharks they encountered, and stressed that the principle challenge was to get close to the sharks in order to film them.

That said, the species is still capable of deadly attack and the behaviour of one individual should not be used to predict the behaviour of others. We will also be filming in a remote location far from help, should the unlikely event of an attack occur. Therefore, it's prudent that we take all necessary precautions to minimise the chances and effects of an aggressive shark encounter.

Control measures:

Diving will take place very close to the beach (likely within 10 metres of the shore). This would help make evacuation to the shore prospectively straightforward in the event of an aggressive encounter. The crew should keep the RIB close at hand as well (e.g. 30 metres offshore), so that access to this support boat is available as a method of evacuation if required.

Toby, Matthew, and both official park monitors, will be able to support the UW dive team with surface-based safety support as observers. Observers on the surface should keep eyes on any shark in the vicinity and any diver in the water at all times if possible (we anticipate it will largely be possible to see the divers and sharks form the surface due to the shallow water in which we will be working). Observers should be continually communicating with each other as to the whereabouts of both sharks and divers as this changes.

We intend to dive in the shallow lagoon waters at Pearl & Hermes to film tiger shark and albatross interactions underwater. The dive team will use closed-circuit rebreathers, which has two main benefits:

- 1) A lack of bubbles makes the dive team less likely to draw attention / affect the behavior of the tiger sharks, and
- 2) Rebreathers will allow the dive team to make fewer, *longer* dives, reducing the amount of time spent on the service getting in and out of the boat. The dive team will aim to make one 2.5 3 hour morning dive and one 2.5-3 afternoon dive.

We have chosen to dive and film on CCR for this shoot specifically because it provides the safest way for us to film and work with this species. This learning comes from extensive conversations with BBC crews that have previously filmed this behaviour at this location. The rationale is that using CCR allows the diver to reduce the amount of time they are floating at the surface, when it is thought that divers are at greater risk of shark attack. CCR will therefore be chosen in place of using pony bottles at the surface, freediving, or using scuba, all of which have been used before on prior shoots with mixed degrees of success.

Divers should surface, where possible, while sharks are not clearly present in the immediate vicinity. If they must surface while I shark is close at hand, all surface observers should keep a keen watch on the surfacing diver, and surfacing should be done swiftly and efficiently, keeping time spent floating on the surface to a bare minimum. Surface observers will be able to communicate with those underwater using an audible signal; by establishing a clear signalling protocol beforehand, it will be clear to the divers underwater upon hearing this sign that they must abort the dive.

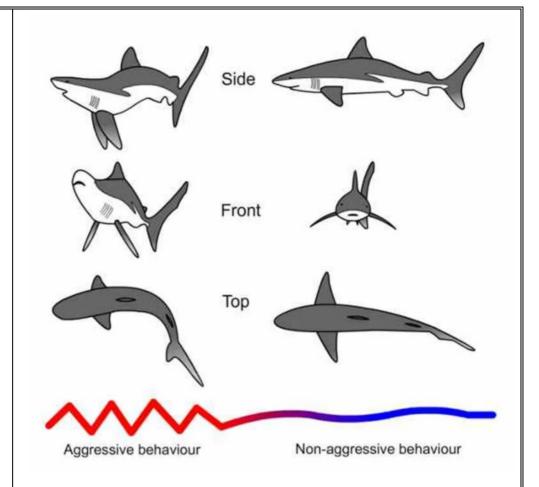
Divers are encouraged to wear chain mail suits while working underwater which will be made available to them.

Dives will be conducted in very shallow water; typically, roughly 5 metres-deep and up to roughly 10 metres-deep. The shallow depth of the dives will make any required evacuation easier.

Due to the shallow depth of the dives, divers will not be required to conduct a safety stop at 5m (unless the dive occurs at deeper than 10m), reducing the time that divers will need to spend suspended in the water column (where they are likely more obvious to visiting sharks).

Divers will each have with them a physical implement with which they can create a barrier between themselves and the sharks. Kyle will have a camera with him and could, in the event of an aggressive encounter, use the heavy camera to block the shark's approach. Kimberley will also have a small, second camera which she could use as a barrier to a shark's approach, as well as a metal stick which can be used to bang on any metal equipment and create a noise that can have a deterrent effect on sharks behaving curiously/ abnormally. While Kimberley will have a smaller second camera, her primary role is of safety above all (including above any request to film whilst diving).

Unusual body language signs to watch for in tiger sharks include: quick movements including rapid flicks of the tail and rapid changes in direction, arched or hunched back, mouth held open, pectoral fins dropped lower closer to the animal's flanks and pointed downwards, the nictitating membrane folded back across the eye (as if the shark is giving a long 'blink') as the animal moves quickly forwards, circling around the diver, bumping the diver.



Divers should keep eyes on any sharks in the vicinity at all times; tiger sharks are known to hunt when they assume their prey to not have seen them. Kyle is a shark-diving specialist, with many years of experience guiding divers through underwater experiences with many species of macropredator shark including tiger sharks. Underwater, the cameraman and safety diver will maintain close contact and line of sight at all times, remaining vigilant in assessing the behavior and posturing of nearby tiger sharks, continually monitoring for any signs of aggressive behavior. Dives will be aborted should any significant behavioral shifts be observed in the tiger sharks, or should the tiger sharks begin to direct their curiosities away from surface prey / albatross and towards dive-team (though again, given their reported wariness of humans at FFS, this is highly unlikely). In this instance, divers should return to RIB/ shore when possible (whichever is closer and safer).

The most imperative aspect to safely diving with tiger sharks is to spend as little time on the surface as possible (a tiger shark's most common area for prey detection). A good dive plan with strict adherence to protocol and constant and vigilant awareness of the behavior of local tiger sharks should allow for safe diving practices that would not necessitate the use of chain-mail suits, which would in turn keep divers and mobile and reactive underwater as possible (however, chain-mail suits will be available and brought with the crew, should they prefer to use them; the option will be available to the dive crew throughout).

There will be a full first aid and trauma kit on the boat and on shore, which has tourniquets. If a diver is bitten by a shark to point of not being able to swim, the safety diver will be on hand to pull them back to shore/ the boat. There will always be at least two people onboard the boat and at least two on shore, who can pull the diver out of the water. The casualty will then be evacuated, see evac plan detailed below.

Toby has been trained in remote locations trauma first aid. Kyle and Matthew also both have in-date remote location trauma first aid training.

Details of Diving Activity planned:

 Boat Launching and landing through surf zone. Dropping off and picking up divers. <u>Hazards identified:</u> Dive boat hitting divers when dropping off or picking up or when surface swimming.

Passengers in the RIB injured as a result of sudden/ rough landing on the beach/ in the surf zone.

Risk:

There is a risk of collision when divers are entering/exiting the water (with the RIB that may be used to transport divers up and down the beach/ from The Searcher). The location is very remote and the chance of other boats (from any other crew other than our own) being on the same beach is extremely low. Collision with the RIB, either moving or at anchor (but still lurching back and forth in strong swell/winds), could result in head injury including concussion. Wet skin can be easily cut by sharp objects and edges.

If the RIB needs to make a landing or exit from/ on the beach or from/ in the surf zone in heavy swell to transport crew or to make an emergency evacuation, there is a risk of sudden thuds and hard falls which could result in injury of passengers in the RIB.

Control measures:

- All team are experienced working off these types of boats and in these situations.
- The skipper is highly experienced with dropping off/picking up divers from the water in this RIB and in these conditions.
- The beach typically experiences low swell and is not a rough landing zone.
- The crew will establish a safe protocol for getting on and off the boat during a safety brief before filming begins.
- Crew will only dive from a boat that is in neutral and will establish how this is communicated clearly between the skipper and divers. It is intended that this protocol will be a clear vocal communication from the skipper before the divers enter the water or approach the boat. Crew will then affirm that they know the engine is in neutral before entry/exit of the water.
- If the weather gets rough during a dive, or any emergency situation occurs above water, the skipper / dive supervisor will call the divers back to the boat, so that they do not have to exit the water when it is unsafe to do so. This will be done by making an audible signal to the divers, which will be detailed during the safety briefing onboard. Both divers will then exit the water first Kyle, followed by the safety diver (this will be confirmed in advance by Kyle as lead dive planner).
- Lifejackets/ work vests, and a throw line should be made available if appropriate/ required.

Details of Diving Activity planned:

 Preparing dive and filming equipment

<u>Hazards identified</u>: Crush by load; Entanglement; Object falling; Manual handling; Explosive release of stored pressure

• Manual Handling of heavy equipment in/out of boats

- Loading/unloading boat
- Passing dive and filming equipment to divers and recovering them from any dive
- Transporting full dive cylinders

• If a dive cylinder is dropped, knocked around or it falls onto its valve, it can crack off, leading to an explosive release of its pressure

Risk:

- While loading, unloading and working from the boat, including dive preparation and recovery, the crew will be moving on an unstable platform (the boat) and carrying heavy dive/camera equipment that could fall and injure someone. Manual handling of heavy equipment, especially leaning into and out of the boat, can lead to muscular skeletal injury.
- The Gates housing is very large and heavy, crew will take extra precautions
 when moving under Kyle's instruction (the sole operator of the GEMINI and
 Gates housing) and also make sure it is well secured (strapped in/ in pelican
 case) during travel.
- If full dive cylinders fall, the valve might be knocked off, causing an explosive release of the pressure.
- These risks are increased during conditions with large surf/swell.

Control measure:

- The majority of dives will be done from shore, reducing this risk and negating the need for boats during diving. However, some dives may be done from the RIB, and regardless, the RIB will be used to transport dive tanks and filming equipment from the Searcher to divers/ the shore
- All crew are strong, physically fit and experienced working in these conditions with this specific equipment.
- Extra care will be taken whilst moving about the boat with heavy equipment. Where possible, lifting will be done using the proper technique using a straight back and lifting with the legs to avoid overworking and potentially pulling back muscles. The team must be responsible for ensuring no crew member over exerts themselves and that task-loading is properly and evenly shared by all.
- The crew will help one another when lifting or moving heavy equipment, especially when loading and unloading the boat and when handing equipment to, or taking equipment from divers in the water.
- All equipment will be safely and securely stored, unless being used.
- Crew will take care at all times when handling pressurised cylinders, being careful not to drop them. When not in use cylinders will be left lying down horizontally as to avoid possibility of cylinder falling over.
- When on the boat, all dive cylinders will be stored lying down horizontally on the deck, and when travelling they will be tied down.
- When carrying kit on and off the beach, crew should opt to make more trips
 of lighter loads rather than carrying excess weight and pushing themselves
 to their limits.

Details of Diving Activity planned:

 Exposed to the sun, wind and rain on the boat or beach without cover.

<u>Hazards identified</u>: Hot environment / Cold water

- Dehydration, heat stroke, sunburn or hyperthermia.
- Dehydration can increase the chance of contracting DCI

Risk:

• The expected sea water temperature is 20-25°C on the surface.

The expected air temperature is 30°C potentially reaching highs of 34°C. there
is a high risk of overheating, dehydration, heat stroke or sunburn when
exposed on the boat or beach or when carrying heavy camera/diving
equipment, which can be physically demanding.

Control measures:

- All crew will wear sunscreen, sunglasses and protective clothing for sunny, wet and windy conditions where necessary.
- The crew will bring adequate shade protection for working on the beach, and can retreat to the shade of a parasol and/ or The Searcher in the head of the day if necessary.
- Plenty of water and electrolyte fluids will be available on the boat and the beach and crew will be strongly encouraged to keep drinking water and keep electrolytes topped up continually throughout the shoot.
- All crew members should stay vigilant in keeping watch for any signs of tiredness and heat stress among other crew members.

Details of Diving Activity planned: Working from boat.

Hazards identified: Fire

Risk:

The Searcher has a total fuel capacity of 9600 gal and 6 fuel tanks on board. The RIBs have engines as follows: Zodiac mark v (90 horsepower honda), Zodiac Mark V (60 hp evinrude)

- There is a remote chance that either the engine or fuel tank on either vessel could malfunction and catch fire whilst in transit or whilst filming.
- The pressurised oxygen cylinders on a CCR pose a high fire risk and are highly flammable.
- Medical oxygen (100% pure oxygen) and lithium-ion batteries (for cameras, in phones etc) on the boat are also highly flammable.

Control measures:

- Divers are experienced at using rebreathers and are aware of the high fire risk associated with the oxygen cylinder on a CCR. Oxygen first stages will always be opened very slowly in all cases. CCR units will be checked for leaks to make sure oxygen isn't leaking from the unit, partly for diving reasons but also to reduce the fire risk this causes.
- All divers who will be filling oxygen tanks are qualified and experienced, including using the Drogon Air Pneumatic booster pump that we Kim will be bringing. It is the team's intent to not need to use the booster, but have enough Oxygen in the two (2) 300cu.ft Oxygen cylinders to allow for cascade fills.
- Oxygen-filling will be done very slowly, not exceeding 5bar / minute. If a
 cylinder gets warm/hot filling will stop until the cylinder cools. Filling will only
 be done in a safe location. A fire extinguisher will be on hand on both the
 Searcher and the RIB, and crew will be briefed on its use before sailing.
- If a fire starts while filling oxygen crew will prioritise their own safety and run away from the fire/jump into the water due to the high chance of a significant explosion.
- Lithium batteries that power the camera are within an underwater housing, which has a moisture alarm, which will alert the diver if the housing is flooding. If a housing floods and the battery has been soaked in seawater,

the battery will be discarded over the side of the boat. If any lithium ion battery on the shoot shows signs of steaming / swelling / smoking / gets very hot, it will be discarded over the side of the boat as judged by crew member. This includes smart phones and tablets.

- The boats are in good condition, seaworthy, inspected annually and insured.
- The skipper is very experienced with 20 years as captain operating in these waters in the Hawaiian National Monument.
- All crew members are experienced at working on boats such as these.
- In the extremely unlikely event of a fire that leads to abandoning ship whilst in transit, both the Searcher and the RIB is equipped with VHF radio, navigation lights and required flares.
- The crew will have a satellite phone with them as well as an InReach satellite
 messaging device with which they can quickly alert authorities in Midway
 Atoll, Honolulu Port, and the production crew in Bristol, as to any emergency
 situation.
- Lithium batteries on the beach should be stored safely, kept dry, and secured when not in use, to reduce fire risk whilst filming topside on shore.
- Suitable fire extinguishers to combat oxygen fires will be available on the dive boat.

Details of Diving Activity planned: Diving and staying wet over multiple days.

Hazards identified: Infection

- Infection on cuts and scrapes
- Ear infection

Risk:

Small cuts/ skin tears become more likely after remaining wet for extended periods. This also increases risk if infection of any small cuts.

Working in this remote location (far from medical assistance; one day's boat journey) adds greater importance to the need to treat any cut or possible infection quickly before it has any opportunity to develop into something more substantial.

Control measures:

- Crew will be proactive in keeping skin aerated to promote drying whenever possible to reduce increased skin softness and risk of cuts.
- If cuts/scrapes do occur, crew will amply apply disinfectant at relevant opportunities to prevent infections that can be promoted in wet diving environments.
- Ear infections are easily picked up whilst working in shallow coastal waters, so crew should rinse ears with clean fresh water at the earliest opportunity after diving, drying sufficiently afterwards.
- There will be a trauma kit on board the boat and members of the crew are first aid trained (See Diving Personnel).
- A full drugs kit will be provided to all divers which has adequate medicines to deal with most usual infections. Toby will also be travelling with his own full personalised drugs and first aid kit. Divers all have access to their preferred method of preventatively treating their ears (including medication for treating ear infection).

Details of Diving Activity planned: Physical Fatigue

Hazards identified: Physical Fatigue

Risk:

The crew are working long days. Risk of exhaustion and fatigue is high, particularly for the boat skipper and cameraman. Over exertion can lead to difficulties in the water or on land that compound many of the existing risks outlined above.

Control measures:

- Divers and non-divers are physically fit (medically tested as so) and all crew are strong swimmers.
- Divers are aware of the risks and physical signs of problems. They will be sensible in their physical workload and will work together to ensure the safety of each other.
- Diving activities will be postponed/aborted whenever crew are showing symptoms of fatigue. These signs should not be ignored with a preference of always postponing filming than pushing to physical exhaustion.
- Adequate breaks will be taken on the boat with ample food and water to keep hydration and energy levels up.
- On days of poor weather (high winds, storms), we will not be at sea and the crew can have a rest day on shore. Rest days can also be taken as and when required.

Details of Diving Activity planned:

<u>Hazards identified</u>: Cylinders holding compressed gas exploding

Risk:

Explosive release of stored pressure

We will be using compressed air, compressed enriched oxygen air and pure oxygen in gas cylinders. There is a very low risk of a cylinder exploding.

Oxygen cylinders used for the refilling of rebreather cylinder should be analysed prior to use for oxygen content as it is rarely 100%.

Control measures:

- All cylinders used will have been suitably serviced before use. All
 equipment used with cylinders will have been suitably serviced before
 use. Care will be taken to not drop or damage cylinders. If there are
 any visible signs of damage to any cylinders, they will not be used
 during the shoot. When in transit, cylinders will be secured in racks so
 that they do not move.
- All equipment, gasses, and personnel will meet local and national regulations.

Details of Diving Activity planned: Filling of pressurized gas cylinders.

<u>Hazards identified</u>: Explosive release of stored pressure; Fire.

Risk:

Filling gas cylinders to high pressures presents risk of high-pressured release of air.

Control measures:

- Only crew experienced and trained in filling gas cylinders (skipper Captn Jon Littenberg and Kyle McBurnie (though Jon will retain control and responsibility of this)) should be permitted to do so. All gas filling should comply with local and national regulations and should be done with extreme care.
- All cylinders to be used and filled will be within test (sourced from Honolulu).

Details of planned activity: Diving & working in a location with an environmentally hazardous alga

Hazards identified: Hazardous substance

Risk:

A species of mat-forming alga (*Chondria tumulosa* sp.) has appeared at Pearl & Hermes Atoll. The alga is not known to have any harmful effect on humans. However, it is showing characteristics of an invasive species and is causing local ecological damage (including smothering of native corals).

Control measure:

Monument officials are keen to restrict the transfer of the alga to other islands in the chain, and as such boats that anchor or moor at Pearl & Hermes are not permitted to anchor at other islands in the archipelago immediately afterwards; they must return directly to the Hawaiian mainland (we will adhere to this guidance).

Details of planned activity: Diving, dropping anchor, & working on a pristine heritage area within the Hawaiian National Monument.

<u>Possible hazards identified:</u> Damage to natural environment & wildlife, physical damage to heritage area.

Risk:

Pearl & Hermes Atoll is a pristine group of islands in the Papahānaumokuākea Marine National Monument, Hawai'i, USA. There are no permanent manmade structures on the islands, and the islands are crucial breeding grounds for several protected species, including black-footed albatross, green turtle and Hawaiian monk seal (Critically Endangered); the location is sensitive and highly susceptible to ecological disturbance.

Damage to local benthic community during anchor.

Control measure:

It is of utmost importance that all crew remember the remoteness, sensitivity and ecological importance of the location where they have the very rare opportunity to be able to work. Crew should follow guidance of the accompanying park official monitors at all times, and if in any doubt about any activity or interaction should consult them first. They should refrain from approaching marine wildlife unless under the officials' supervision, and refrain from approaching marine mammals both on shore (e.g. hauled out monk seals) and in the water (e.g. dolphins) at all times.

Captn Jon Littenberg is very used to working in these remote islands, and to anchoring wisely and sensitively in the Hawaiian National Monument, avoiding damage to local coral or benthic communities, and anchoring in sand or loose substrate only.

We are currently discussing with the Hawaiian National Monument permitting team as to the safest and least disturbing option of anchoring or deploying a mooring. One possible option that Jon has often employed at other sites across the National Monument is to locate a suitable site (ideally a large rock or volcanic protrusion, that has no coral growth on it, in an area clear of other coral, in relatively shallow water), then ensnare the rock with a cable that leads to our anchor line. We get precise placement using this method as opposed to a chain on the anchor potentially dragging on the seabed if winds or currents shift. From a logistics standpoint it also means there would be no risk of getting the anchor stuck in severe weather so it can be a safer method.

DIVING PERSONNEL	DETAILS
1. Dive Contractor	Name of Dive Contractor: Living Planet Productions Ltd.
(Please list competence	
and qualifications)	The Dive Contractor has overall responsibility for the safety of the diving project
	(in the UK they must be an HSE and First LOOP Productions Ltd.
	approved dive contractor).
	To be signed off by Bristol Channel Divers.
2. Dive Team Size:	List total team size:
	7-8 total crew: Kyle McBurnie, Kimberley Jeffries, Toby Nowlan, Matthew Robinson, Jon Littenberg, Park Monument official monitors (2), possible extra boat crew
	Dive team size: 3 (Kyle, safety diver, Toby)
3. Dive team:	Camera operator & lead dive planner: Kyle McBurnie
Names together with list	
of competence and qualifications.	Certifications : PADI Divemaster, Rescue Diver, and Open Water Scuba Instructor (OWSI)
	rEvo Rebreather diver / TDI CCR certified
See both Silverback Films	DAN Diving First Aid & O2 administrator
Ltd Diving Guidelines and Diving Risk Assessment	USCG 100-ton master's license (captain's license).
Notes.	Kyle worked underwater with large pelagic sharks hundreds of times over the
	course of the past 10 years. This experience includes blue and mako sharks off
	San Diego, bull sharks in Fiji, bull sharks in Mexico, Galapagos sharks in Hawaii,
	tiger sharks in Hawaii and extensively with great white sharks in Guadalupe and
	California (all of these examples were with a camera and without a cage). During
	these shark-diving experiences, Kyle was either the primary camera operator
	(most instances) or lead in-water safety diver (for white sharks at Guadalupe,
	makos and pelagic hammerheads off San Diego, and tigers in Hawaii). Kyle used
	chain mail suits during specific instances, principally with large blue and mako sharks during large feeding events. He is a PADI certified Open Water Scuba
	Instructor, a rEvo certified rebreather diver with 150+ hours CCR logged
	instructor, a 12vo certified repreatiter diver with 150+ flours cert logged

underwater, an AAUS certified scientific diver (currently with Scripps Institution of Oceanography), and has acted as DSO for various productions and has helped manage safety for diving expeditions in tropical areas, as well as temperate California waters all the way to managing dive plans and safety in the Aleutian Islands on a REMUS-oriented scientific expedition. Kyle is incredibly experienced not only at filming large, pelagic sharks underwater, but in training people how to safely interact with these shark species underwater.

Kyle has over 500 hours filming marine animals underwater, and has spent his career learning and understanding shark behavior in order to operate safely within their presence, and has never had an incident in the water.

In-water Safety Diver: Kimberley Jeffries

PADI Dive Instructor, rEvo rebreather instructor (instructor in a range of other disciplines), Advance Scuba Rescue, EANX Diver, DAN Instructor, Freediver Instructor & Supervisor, Skipper's License. No. dives: 1500+

Kimberley is an extremely experienced diver and instructor. She has supervised and trained divers in a broad range of professional disciplines, including rEvo rebreather, since 2014. Recent relevant work includes as a safety diver, underwater camera operator, vessel and topside support for Exposure Labs, National Geographic, and Berad Studios. Kimberley lives in Hawaii and has worked in the National Monument many times; she is very familiar with working at atolls in throughout the monument.

Dive (surface) Supervisor: Toby Nowlan

HSE Commercial SCUBA, PADI Rescue Diver, PADI Drysuit Speciality First Aid: Remote Locations Medicine, Expedition Medicine, Emergency First Aid, O2 Administrator.

No. of Dives: 155. Max depth - 40m

Relevant experience:

Toby received his HSE training with DV Divers in Strangford Lough. This involved extensive one-to-one bespoke training including many improvised emergency situations in very difficult conditions, and joining with active daily commercial operations. He has since worked as safety diver on natural history filming shoots and filmed second camera underwater. He keeps his dive experience up to date, diving recreationally every few months. He has significant experience diving with and working with sharks, including working with large macropredator species (e.g. great hammerhead, bull, oceanic whitetip and make shark).

Toby is not certified on the use of CCR, but is familiar with their use, how and why they are employed, and will work extensively with Kyle McBurnie (lead dive planner) ahead of the shoot to ensure he is very familiar with all relevant protocols and procedures to be followed and that he is briefed on the basics of the units (and run through pre-dive checks before diving begins).

The supervisor is responsible for the safety of the divers. The supervisor must keep a record of all dives on the Supervisor's Dive Forms (attached to this document) that need to be kept and given back to production at the end of the shoot.

The nominated Diving Supervisor must not dive and cannot be a standby diver while the diving operation is in progress.

4. Medicals **Expiry dates of medical for every member of dive team:**

Toby Nowlan: 30/ 11/ 2021 **Kyle McBurnie:** 01/24/2022 **Kimberley Jeffries:** 12/10/2021

5. First Aid.

Details of first aid qualification held by team members:

All the below are 'in date' (within last 3 years):

Toby Nowlan - First Aid: Remote Locations First Aid, Expedition Medicine, Emergency First Aid, O2 Administrator, PADI Rescue Diver

Kyle McBurnie - DAN Diving First Aid & O2 administrator

Kimberley Jeffries - AED, CPR, BBP, SFA, O2 administrator, Aquatic Injuries, Advanced Scuba Rescue, DAN Instructor

Matthew Robinson - Remote Locations First Aid, Offshore First Aid, Emergency Helicopter Escape

Jon Littenberg – Captain Littenberg and all boat staff have Advanced First Aid and CPR training

6. Medical Equipment:

Medical oxygen available:

There will be a pure oxygen administration kit on the RIB/ kept with the dive supervisor at all times. This will include a resuscitation bag for an unconscious diver. Emergency oxygen will be provided for a stricken diver until medical care can be reached; the nearest emergency medical care (and next supply of oxygen) is 12 hours away by boat. 12 hours is the maximum recommended time that a diver is to be on continuous O2 (to allow CNS/OUT space for a chamber treatment; which in this instance would be given in Honolulu).

Medical oxygen calculation:

In an emergency it will take the skipper the best part of a day to reach Midway Atoll Harbour dependent on conditions. We will plan for up to 12 hours of O2 treatment and will be provided with 2 x 3L medical O2 kits.

15LPM (litres per minute) is required. Crew will have $2 \times 3L$ (6L) cylinders filled to 180B = 1080L. 10B is required for regulator function, leaving: $170B \times 6L = 1020L$ O2 available. 1020L/15LPM = 68 minutes of emergency oxygen available

Oxygen available for refilling rebreather tanks:

Two (2x) 300 cu.ft. Oxygen K-Bottles from AirGas, filled with 100% O2. Oxygen K-Bottles will be stored in a safe, ventilated area as decided by Captain and Crew, away from flames.

This will provide additional oxygen in the vent of a medical emergency and can be used to top up emergency O2 kits.

First aid kit:

First aid kit will be provided by the crew and kept close at hand to the Dive Supervisor (potentially split between boat and shore).

The kit will include ample supplies relevant to the shoot being remote, tropical and marine e.g. anti-histamine tablets and creams, anti-sea sickness medications

	(not to be taken by divers or anyone operating machinery), antibiotics for ear, eye and skin infections, broad spectrum digestive antibiotics, Fucidin antibiotic cream, antiseptic iodine ointment, ample rehydration salts and trauma kits (including: burn gels, tourniquets, bandages, CELOX quick-clot).								
7. Diver Insurance.	Diver insurance is included as part of production insurance. Our insurers are CEGA (see below). If there is a MEDICAL EMERGENCY, resulting in hospitalisation, please call:								
	in hospitalisation, please call: CEGA GROUP SERVICES +44 (0)1243 621525								
	Have the following information available:								
	The telephone number you are calling from.								
	2. The name of the Hospital and the Doctor and their telephone numbers.								
	3. Certificate number: GABT8007/0/20								
8. Pregnancy	Is any member of the team pregnant? No								
DIVE OPERATION									
10. Dive Conditions:	Dive environment – pool, marine, freshwater, shore, reef, enclosed wreck, open water, strong current, ice or cave:								
	Up to 12m shore diving (within 20 metres of shore).								
	Conditions - Depth, visibility, temperature and current:								
	Current: Mild								
	Vis: Average expected 8-20m								
	Depth: All dives will be shallower than 15m, most at around 5 metres depth, occasionally up to 10m.								
	Diving Altitude - sea level or higher: Sea Level								
	<i>Water Temperature:</i> 20-27°C								
	Air temperature: 24-32°C								
11. Animal/subject:	Dangerous or benign:								
	Tiger shark (dangerous)								
	We will be hoping to be in the water with tiger sharks that have migrated to the atoll just for these two weeks, having timed their arrival exactly with the fledging of the albatross chicks. The tiger shark (<i>Galeocerdo cuvier</i>) is a large macropredator, and can attain lengths greater than 5 metres. We are hoping to								

film the predation of albatross chicks as they land on the water and are attacked and eaten by tiger sharks from below the surface.

Please see 'attack by animal' hazard above for further details

Handlers, Advisors if necessary (experience, qualifications and role):

Please see 'attack by animal' hazard above for further details

Kyle, Toby and Safety Diver all have extensive experience diving with large macropredator sharks.

Please see 'attack by animal' hazard above for further details



12. Dive Plan:

Diving type - snorkel, scuba, Nitrox, Tri-mix, rebreather (see 13: Technical Diving): Divers will be on closed-circuit rebreathers. The divers will only dive using equipment that they are qualified and experienced to use. Safety divers will always maintain visual contact, and have SMBs available to use throughout. Surface safety observers will maintain visual contact with divers wherever possible, and keep a way of audibly contacting the divers in the water in the event of an emergency (such as a metal pole/ stick banged against the boat/ tank).

Diving plan (e.g. buddy pair, surface tether, solo):

Buddy Pair. Cameraman will dive with in-water safety diver who will always maintain visual contact.

Planned depth, duration:

Most dives will be shallow at around 5m – with an anticipated max depth of 10msw; safety stops will not be necessary and considering the desire to remain below or above the water column due to the presence of sharks, are advised against. Dive times and duration will be planned by the dive team each day and they will strictly adhere to dive computers.

Diving frequency – single/multiple dive days and number of days:

Multiple dives per days over 15 days. Divers will be careful to work within their non-deco limits. All diving will follow NOAA CNS/OTU tables to prevent oxygen induced myopia becoming an issue. We expect to be diving for an average of 3-5 hours/ day across 3+ dives/ day.

No stop or decompression stop:

No stop/ decompression diving

Surface support (e.g. inflatable, shore):

A rigid inflatable boat (RIB) will be available to be stationed near the divers just offshore for the duration of the dives. The Searcher vessel will be anchored or moored up within easy reach of the dive sites (currently anchor point/ mooring location not known exactly, but we estimate it to be within 2-5 minutes from the dive sites). On the RIB or on the beach (depending on how far offshore the dive is taking place), will be surface support in the form of the designated Dive Supervisor and two 'surface safety observers'.

Dive locator device: Kyle will carry a Nautilus Lifeline Marine VHF (marine rescue GPS PLB).

Permanent surface marker buoy:

Delayed Surface Marker Buoy: All divers will carry DSMBs

The dive team will be diving from the shore and from the RIB, and the dive team will consist of one underwater cameraman, one in-water Safety Diver and one Dive Supervisor on the surface. Once pre-dive checks have been completed, the Dive Supervisor will ensure no tiger sharks are in the immediate area and give the OK for the dive team to enter the water. The dive team will conduct a quiet negative entry into the water, immediately descending with necessary equipment to the bottom of the lagoon. Once on the bottom (approx 5-6 meters depth), the dive team will assess their surroundings and remain in the same general area. No long underwater swims or traverses will be conducted so that the RIB and topside boat may be aware of dive team's location at all times.

13. Decompression regime:

Which tables or computers used:

Computers – shearwater, NERD/NERD2, rEvo Dreams. Various OC computers, all in service and used as recommended by manufacturer.

Stops or safety stops:

Safety stops will not be necessary assuming dives are less than 10m and considering the desire to remain below or above the water column due to the presence of large sharks, are advised against. I

14. Bail Out Systems:

Details of bail out systems - pony bottles etc:

The closed-circuit rebreather divers will all carry bail out gas.

Camera operator may use on-board bailout from 3I diluent cylinder (considering dives will be shallower than 15m), the safety diver will carry more bailout gas for both divers in stage cylinders.

15. Dive Equipment:	Equipment service details:
	Equipment serviced by qualified personnel according to the manufacturer's recommendations. Some dive cylinders will be rented from approved local dive operators. This equipment will be thoroughly checked by experienced dive team before use.
16. Type of camera gear:	How many underwater cameras (behind-the-scenes filming etc.)?
	Red GEMINI in a Gates housing Z-cam e2 in a custom 'polecam' housing (not used when diving) Panasonic S1H in Salty Surf housing for use as second camera (by safety diver)
17. Technical Dive Equipment: (Rebreathers, mixed gas and Full-Face Masks)	Closed circuit rebreathers. (rEvo). Kyle and Kim will dive rEvo III minis, with Shearwater CCR computers, NERD 2 HUD displays, and rEvo dreams. They will have RMS scrubber monitoring systems on their rEvo units, and will be diving 21% dil and 100% O2. No full face masks will be used during the shoot. Bail-out gas will be 21%.
BOAT	
18. Operating Conditions:	Weather, expected sea state, landing conditions: Sea conditions — relatively sheltered location close to shore with a mixture of mostly calm conditions. Occasionally it may become windy and choppy at sea and this may cause choppy conditions/ large swell close to shore where we will be diving. We will keep a close eye on weather forecasts via the Satellite messaging device and dives will not be attempted if conditions do not allow (e.g. strong swell, high winds, visibility is reduced considerably). Heavy thunderstorms that can severely reduce visibility can occur at the location — these will also be monitored in advance as much as possible. Weather is expected to be warm and dry at the surface with an average daily temperature of 25-32° C.
19. Details:	Size, type, name, engine etc. of boat: The Searcher: Length: 96' Gross tonnage: 105 Total fuel capacity: 9600 gal Total number of fuel tanks on ship: 6 Vessel type: Steel trawler Marine Sanitation Device: MSD Headhunter marine Type: II Call sign: WDA6100



The RIB:

Zodiac mark v (90 hp Honda), Zodiac Mark V (60 hp Evinrude)





20. Skipper:

Name, experience and qualification:

Captn Jon Littenberg has over 20 years experience as skipper of The Searcher in the Monument, running over 50 expeditions to different atolls.

License: 200 Masters License

Skipper & Vessel ID/ registration details:

Captains' name: Jonathan Littenberg, Gillian Wysock

IMO#:8981884 Vessel ID#: 1103056

Flag: USA

Vessel type: steel trawler Call sign: WDA6100

Embarkation port: Kewalo Basin, HNL, Hawaii

Last port vessel will have been at prior to this embarkation: Kewalo Basin, HNL

Hawaii

EMERGENCY

DETAILS & CONTACTS

21. Recompression and Evacuation:

Skipper along with Toby will coordinate evacuation on journey, using either VHF or satellite phone to liaise coastguard, Midway Harbour and Honolulu Hyperbaric Chamber (located in Kuakini Medical Center). Satellite phone and InReach will be available in a 'grab bag', with all emergency numbers saved on them. The fastest and best way to communicate this will be agreed in person during the safety briefing at the start of the shoot. See below for contact numbers.

In the event of a diving incident DCI or any other form of medical emergency:

- Casualty to be pulled by buddy to shore or side of the boat (whichever is closer) where the on-board or on-shore crew will aid removal from the water. The Dive Supervisor will supervise the removal of casualty from water. The Dive Supervisor will then lead rescue operation.
 - 2. First Aid and CPR. Administer casualty with 100% O2.
 - i. For Unconscious diver set to free flow to 15litres/minute
 - ii. For conscious diver set to demand system**
 - iii. Do not discontinue use until the tank is empty
- **Diver with a suspected lung injury/barotrauma should not use a demand regulator but a free flow mask set at 12LPM
- 3. CALL US COAST GUARD JOINT RESCUE COORDINATION CENTER (JRCC) IN HONOLULU IMMEDIATELY. THEY WILL WORK WITH MIDWAY TO ARRANGE MEDIVAC FLIGHTS IF NECESSARY AND WILL ALSO DETERMINE WHAT SHIPS OR OTHER RESOURCES ARE IN THE AREA TO SUPPORT

US COASTGUARD (24/7): +1 808-535-3333

(Midway has a fully operational airstrip capable of accommodating large commercial aircraft which, along with the port and other services, would be available in a critical emergency. The coast guard would assess the situation and arrange everything).

Midway - Honolulu travel time: 4 HRS 40 MINS

4. **CONTACT CEGA** (MEDEVAC INSURERS) AND UPDATE THEM ON THE SITUATION/ WHAT THE COASTGUARD IS ARRANGING:

If there is a **MEDICAL EMERGENCY**, resulting

in hospitalisation, please call:

CEGA GROUP SERVICES +44 (0)1243 621525

Have the following information available:

- 1. The **telephone number** you are calling from.
- 2. The name of the **Hospital** and the **Doctor** and their **telephone** numbers.
- 3. Certificate number:

GABT8007/0/20

5. CALL SILVERBACK OFFICE:

Vicky Singer (PC) – Mobile: +447740354946

Or Helen Healy (PM) - Mobile: +44 7803084928

Or Jane Hamlin (Head of Production): +44 7768 057845

1st option Insurance will immediately be notified.

6. MIDWAY ATOLL REFUGE MANAGER (IF NEEDED AFTER SPEAKING WITH COASTGUARD):

PAMELA RAPP, +1 808-954-4818

7. EMERGENCY SERVICES IN HONOLULU (IF NEEDED AFTER SPEAKING WITH COASTGUARD):

BOTH THE BELOW ARE ON THE SAME CAMPUS. OPEN 24/7. TRAVEL TIME FROM AIRPORT: 15 MINS

1ST: CALL KUAKINI MEDICAL CENTER EMERGENCY DEP - +1 (808) 547-9540.

DIVER WILL BE EVALUATED AT KMC EMERGENCY DEP FIRST. DR. JASON FLEMING IS KMC EMERGENCY MEDICINE DIRECTOR

2ND: CALL UH HYPERBARIC TREATMENT CENTER: +1 (808) 587 3425

DIVER WILL THEN BE ACCEPTED AT HYPERBARIC CHAMBER (ON SAME CAMPUS).

CHAMBER DIRECTOR IS DR. SUE STEINMANN

- *Toby has confirmed that we would be able to pay for use of the hyperbaric chamber in the event of an emergency with the Medical Director*
- 8. Likely evacuation strategy: Get casualty to Midway with The Searcher as quickly as possible. Casualty then evacuated from Midway via airstrip using charter or commercial aircraft. In the event of a capsizing/ ship damage, coastguard and crew would liaise with vessels nearby in the area and again with Midway Refuge.

During evacuation crew must ensure to:

- 1. Keep patient secure and comfortable
- 2. Record patient's name, dive history, timings and other relevant information
- 3. Secure and keep all patient's dive equipment do not disassemble
- 4. Send recorded information, patient's dive computer and equipment with evacuation personnel

In case of non-diving related emergency at dive site:

- 1. Assess casualty providing First Aid and CPR.
- 2. Follow same evacuation protocol as laid out above:
 - i. CALL COASTGUARD
 - ii. CALL CEGA
 - iii. CALL SILVERBACK OFFICE

In case of emergency whilst in transit in Hawaii:

- 3. Call **911** emergency number from a call phone. This will put you through to a call centre, from which you'll be routed to your nearest provider.
 - 4. Call Silverback office & CEGA Medical Evacuation as above

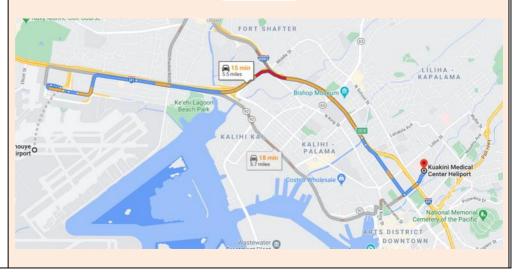
Details of nearest trauma hospital and chamber:

The nearest hospital with a hyperbaric chamber is in **Honolulu**:

Hyperbaric Treatment Center, Kuakini Medical Center HPM Tower Ground
Floor, 347 N Kuakini St, Honolulu, HI 96817, United States
+1 808-587-3425

(CALL KUAKINI MEDICAL CENTER EMERGENCY DEP FIRST TO ARRANGE REVIEW OF CASUALTY) - +1 (808) 547-9540.

OPEN 24/7



Toby has confirmed that we would be able to pay for use of the hyperbaric chamber in the event of an emergency with the Medical Director

Trauma Hospital:

The Queens Medical Center, 1301 Punchbowl St, Honolulu, HI 96813, United States
+1 808-538-9011

On-location contacts:

Toby will have a satellite phone and InReach messaging device available to him at all times in case of emergency. Numbers:

The Monument monitors will also have a satellite phone and InReach messaging device available to them at all times. Numbers:

The Searcher satellite phone number:

The Searcher VHF radio:

1st Option Safety: +44 020 7985 7155 / +44 7792 102496

DDRC emergency 24 hr medical advice line: + 44 1752 209 999

Royal Naval Hyperbaric Doctor: + 44 07 999 292 999

COASTGUARD (24/7): 24/7 AT +1 808-535-3333

Based on the information I have been given I am satisfied that this risk assessment meets the requirements of the Living Planet Productions Ltd Diving Guidelines.

Living Planet productions Team member

Name: Neil Brock

"I have signed this document on the condition that all my recommendations and comments have been considered or taken into account."

Signature:

Date signed: 20th January 2021

Sign Off I have read the above and am satisfied that:

- It is an adequate assessment of the activity and the precautions identified are sufficient to control the risk
- Adequate arrangements are in place to co-ordinate the safety of those potentially affected
- That the equipment and techniques to be used are fit for purpose and that all those using them are trained in their use

Diving Supervisor

Name:

Toby Nowlan

Signature:

Date signed: 20th January 2021



YOUR SERIES/EXECUTIVE PRODUCER SHOULD ALSO HAVE READ THIS RISK ASSESSMENT ALONGSIDE YOUR MAIN RISK ASSESSMENT FORM.

Producer

The producer is the client and is responsible for:

- Liaising with the First LOOP Productions Ltd Diving Advisory Team.
- Appointing a competent Dive Contractor (where the First LOOP Productions Ltd is the Dive Contractor the producer is responsible for appointing a competent Dive Supervisor).
- Ensuring an adequate risk assessment is in place for the diving work.
- Providing such resources (including staff and production time) as may be necessary to ensure that diving activities can be safely carried out.
- Liaising with the Dive Contractor/Supervisor to communicate the filming requirements.
- Ensuring that the Dive Contractor/Supervisor has all the relevant documents, information about the dive team, equipment to be used etc.
- Assisting and liaising with the needs of the Dive Contractor/Supervisor.
- Supporting the Dive Contractor/Supervisor in the event of an emergency.
- Ensuring that the diving project records are returned to First LOOP Productions Ltd.

Diving Contractor

The diving contractor is the individual or company that employs the divers for a project. There can be one person and one person only who is the diving contractor for that project; they have overall responsibility for the safety of a diving project. The diving contractor is responsible for:

- Ensuring the diving project is planned, conducted and managed in a safe way.
- Appointing a competent Diving Supervisor (the contractor and supervisor can be the same person).
- Assessing the risks and ensuring that a diving project plan is prepared.
- Ensuring the dive team is aware of the plan.
- Ensuring there are sufficient people with suitable competence to carry out the diving operation safely.
- Ensuring that adequate arrangements are in place for first aid and medical treatment in the event
 of a reasonably foreseeable emergency connected with the diving project. These arrangements
 should include appropriate equipment, competent and qualified personnel and an evacuation
 procedure.
- Producing a suitable and sufficient risk assessment and a dive project plan.
- Ensuring that diving project records are kept.
- Ensuring that all other relevant regulations are complied with.

Diving Supervisor

The supervisor must be appointed in writing by the diving contractor. The supervisor should be suitably qualified and competent in the techniques being used in the diving project. The supervisor is responsible for the safety of the diving operation that they are supervising and should be on site and in direct control of the diving operation. When diving is taking place at separate sites, a diving supervisor must be appointed for each site.

The nominated Diving Supervisor must not dive and cannot be a standby diver while the diving operation is in progress.

The supervisor is responsible for:

- Checking that the divers are competent to dive and to carry out the work required underwater.
- Ensuring that everyone involved in the diving operation is aware of the objective of the diving and the risk assessment/project plan.
- Ensuring that there is adequate communication with the divers in the water.
- Checking the site on the day of the dive and ensuring that risk assessments are still relevant in prevailing conditions.
- Checking that the diving equipment provided is appropriate and adequate for the project.
- Checking the availability of medical oxygen and ensuring the kit is assembled and functions properly prior to any diving.
- Maintaining proper records of the diving operation.

All members of the dive team must read this Diving Risk Assessment Form and sign here before any diving takes place if satisfied with the dive plan and procedures as outlined:

NAME	SIGNATURE	DATE
TOBY NOWLAN	TNIN	
KYLE MCBURNIE		
KIMBERLEY JEFFRIES		



HEALTH DECLARATION FORM / COVID-19

Read this statement prior to signing it. You must complete this additional medical questionnaire to enrol in a diver training program or to participate in any diving activity. If you are a minor, you must have this statement signed by your parent or guardian.

DIVER MEDICAL QUESTIONNAIRE

The purpose of this medical questionnaire is to ensure that you are medically fit to dive. Please answer the following questions with a YES or NO. If you are not sure, answer YES. A positive response means that there may be a preexisting condition that could affect your safety while diving. If any of these items apply to you, we must request that you consult with a physician, preferably a specialist in diving medicine, prior to participating in diving activities.

Within the 40 days immediately preceding the date of this Health Declaration Form, have you:

1.		OR PRESUMPTIVELY PO DTENTIAL CARRIER OF T	,	HE NEW CORONAVIRUS OR	- SARS-COV2) OR BEEN
	T YES	NO	TE CORONAVIROS?		
2.			V ASSOCIATED WITH CO	OVID-19 (FEVER; COUGH; FAT	TIGLIE OR MUSCLE PAIN:
٤.				HE; LOSS OF TASTE; OR DIARF	
	☐ YES ☐	NO		12, 2000 01 11 10 12, 01 121 11	
3.			AS HAZARDOUS WITH	AND/OR POTENTIALLY INF	ECTIVE WITH THE NEW
			OR REGULATORY AUTHO		
	YES	NO			
4.		ONTACT WITH OR IN THE	IMMEDIATE VICINITY OF	ANY PERSON WHO TESTED	POSITIVE WITH THE NEW
	CORONAVIRUS OR V	WHO WAS DIAGNOSED A	S POSSIBLY BEING INFECT	ED BY THE NEW CORONAVIR	US?
	YES	NO			
The	information I have pro	wided about my medical h	story is accurate to the bes	st of my knowledge. I agree to a	accept responsibility for any
		existing or past health co			
Lak	so commit to inform <u>ir</u>	structor / dive centre name		about any symptom that may a	rrive after having filled in this
dec	plaration and/or having	come into contact with sor	neone who has tested positi	ive after signing the declaration.	
Full	Name	Date		Guardian's Full Nar	ne Date
Sin	nature			Signature	
	riatore			Orginature	
_					
Α	DDITIONAL I	DECLARATION	S / COVID-19		
	I WILL, if asked, v	vear a protective mask	at all times while partic	ipating in the diving training	/ activities arranged by
ш	instructor / dive centre		·	asonable preventive steps that	
	instructor / dive centre	name	, or any relevant pu	blic authority.	
	I WILL accept and ob	serve all instructions by	nstructor / dive centre name	inter	nded to abide by all existing
				temperature taken prior to partic	
			ion will be considered as my		
L	dire anning manne			at authority or service provider for	or the purposes of ensuring
				during, and after any diving acti	
			, , , , , , , , , , , , , , , , , , , ,		
Ful	Name	Date		Guardian's Full Nar	ne Date
_					
01-					
	nature			Signature	
	nature			Signature	

MANAGEMENT & DIVE TEAM	SITE DETAILS	WEATHER DETAILS
SUPERVISOR:	LOCATION:	FORECAST:
CAMERAMAN:	DATE:	ACTUAL:
BUDDY/TENDER:	TIDE TIMES: HW: LW:	WIND:
ASSISTANT:	SLACK:	SEA CONDITIONS:
PROD/DIRECTOR:	CURRENTS:	WAVE HEIGHT:
VESSEL:	WATER TEMP:	AIR TEMP:

On returning from location, please give the location dive logs (signed by dive team members) and all log sheets to Jenni Collie or your production co-ordinator for storing with the PRA Form.

SILVER BACK SUPERVISOR'S CCR DIVE LOG

Supervisor						L	_ocation					Sea Conditions	
Camera Operator	amera Operator				Date					Weather			
In Water Standby						ŀ	High Water					Wind	
Producer/Director						L	∟ow Water					Current	
			Gas A	nalysis	Gas P	ressure	ıre		Ti	Time	May		
Name	Unit and con	nputer used	Dil	02	Dil	02	Bailout Analysis	Bailout Pressure	Time Left Surfa	Arrived at Surface	Max Depth	Cor	mments
Nomination of Supervisor /	Change of Sup	ervisor											
If changing or nominating a ne	w supervisor a th	nrough update (on preced	ding diving	activity	on this s	shoot must be under	taken, Supervisors sh	ould sign be	elow to confirm this ha	s happened.		
Supervisor (Name Prin	ted)						S	igned				Date	Time
Now Supervisor (Name Bring	tod)							igned				Date	Ti
New Supervisor (Name Prin	teu)						5	igilea				Date	Time

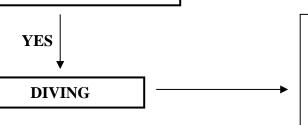
DIVE ACCIDENT MANAGEMENT

HAS VICTIM BREATHED COMPRESSED AIR UNDERWATER WITHIN THE LAST 24HRS?

NO →

NO

NOT a diving accident – administer First Aid & CPR (if necessary) & go to nearest hospital.



MILD

FIRST AID

- 1. Reassure and give basic first aid
- 2. Administer 100% Oxygen
- 3. Give 1 litre of drinking water (still)
- 4. Place victim in side recovery position

COMPLETE RELIEF AFTER 30

YES↓

Keep patient under observation & contact diving doctor immediately

CPR

- 1. **OPEN AIRWAY** (tilt head gently, lift chin)
- 2. **CHECK BREATHING** (Look, Listen, Feel up to 10 seconds). If breathing place in recovery position & get medical assistance/help.
- 3. **IF NO BREATHING GIVE 2 EFFECTIVE BREATHS** (but if you area alone with patient continue for 1 minute)
- 4. ASSES CIRCULATION

CIRCULATION PRESENT – call for help & ventilate 10 breaths. Continue rescue breathing. Check circulation every 10 breaths.

NO CIRCULATION – compress chest @ 100 compressions per minute. 15:2 single rescuer or 5:1 two rescuers.

LOOK FOR SYMPTOMS

MILD: Fatigue, skin rash (except on chest), itching.

SERIOUS: Rash on chest, pains, weakness, pins & needles, dizziness, severe cough, shortness of breath, visual disturbance, staggering, paralysis, unconsciousness, convulsions.

SERIOUS

EMERGENCY FIRST AID

- 1. CALL EMERGENCY SERVICES & ARRANGE EVACUATION TO HYPERBARIC FACILITY.
- 2. **PROVIDE CPR IF REQUIRED** see box
- 3. **GIVE OXYGEN** see box
- 4. IF CONSCIOUS GIVE WATER (1 litre)
- 5. CALL THE DDRC ON +44 1752 209 999 FOR HELP AND ADVICE
- 6. KEEP PATIENT IN LEFT SIDE RECOVERY POSITION

OXYGEN

- 1. **PROVIDE 100% OXYGEN** breathing or non-breathing diver.
- 2. **VENTILATED AREAS** administer O₂ clear of sources of ignition (e.g. electrical equipment, engines).
- 3. NEVER LEAVE PATIENT ALONE
- 4. REMOVE OXYGEN IF PATIENT CONVULSES (don't attempt to restrain patient).